

**MAKING FIRE THE OLD-FASHIONED WAY**

**7**  
TIPS

# MODERN PIONEER

## 10 DEER STRATEGIES

METHODS THAT  
PUT VENISON ON  
THE GROUND

**KILLER  
ACCURACY  
OUT OF  
LOW-COST  
GUNS**  
P.76

### FEATHERS FOR THE WALL

Mount Your Next  
Spring Gobbler

### CATFISH NOODLING ADVENTURE

Fishing With Your  
Own Two Hands

### BACKWOODS CARPENTRY

Shelter Without  
Hammer & Nails

### BROADHEADS OUT OF SAW BLADES

TRUE FUNCTION FOR CHEAP



### FLINTLOCK MAINTENANCE

7 TIPS FOR DOING IT RIGHT

FROM THE EDITORS OF AMERICAN SURVIVAL GUIDE  
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*"In the end, it's not the years in your life  
that count. It's the life in your years."*

—ABRAHAM LINCOLN





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# MODERN PIONEER

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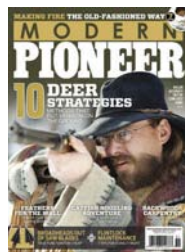
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By Larry Schwartz



# Effective Still-Hunting

**I DON'T SEE** a lot of folks still-hunting the woods for big game nowadays. Instead, they prefer to hunt from a stand or ground blind, or spot and stalk.

But the time-honored concept of easing through the woods, using two or three quiet footsteps followed by a good look around of your surroundings, keeping a sharp eye out for game movement, is a method that's hard to beat, not only because it's highly engaging and proactive, but because it allows you to hunt certain types of terrain that are difficult to hunt any other way.

However, to still-hunt effectively, you must learn to walk quietly—something few people are good at. For the most part, it's a skill you must learn. The more you do it, the better you'll become.

While on a hunt more than 20 years ago, I had the opportunity to hunt with a very experienced bowhunter. As we eased down a game trail, sneaking for game, he looked over at me and said, "If you're going to be a good hunter, you have to learn how to walk right. Don't put your heel down," he said, sternly. "Walk by rolling the front side of your boot."

I took that advice to heart and began to work profusely at quieter footwork in the woods. With that said, here are more tips I've learned during my two decades of still-hunting big game.

## Wear the Right Boots

To still-hunt right, you must ditch the noisy, heavy, clunky boots. Try to choose lighter footwear with soles that cushion or give somewhat under foot. This alone will make you a better still-hunter.

Quiet still-hunting boots that come to mind are the Danner Jackal, LL Bean Bean Boots and Russell Safari or Judy Boot. Lightweight hiking shoes (in mild weather) also work well. These include the North Face Ultra 106, Solomon XA Pro 3D and Oboz Firebrand II, among others.

All these models have quiet, low-lug soles that don't shift small debris underfoot and depress slightly when in contact with the ground for increased silence.

## Be a Minimalist

You can't be stealthy with 15 to 20 pounds of extra gear on your back. Pare down, taking only what's needed. I use a compact water-reservoir pack with a very small accessory pouch that holds a lightweight knife, my license, compact GPS and two energy bars. I can stay out nearly all day with this system.

## Watch the Wind

Always travel against the wind and constantly monitor it using a powder bottle. Recognize predominant currents and know that sudden changes in the wind are usually temporary or dependent on terrain. Even so, you must still work with these fickle breezes.



## Go Real Slow

Sometimes you might have to walk as slow as a turtle if vegetation is noisy. Use common sense and stop frequently to look and listen for game.

## Choose Good Paths

Don't waste your time along noisy pathways; you won't do well here. Seek out the quietest routes, such as old two-tracks, or a well-worn deer or cow trail. These pathways offer the quietest step and steer you away from dense, unconquerable vegetation.

## Keep Your Guard Up

Though it will happen from time to time—because this hunting method can be mentally exhausting—try not to let your guard down. Stay alert by continuing to step quietly and remain on the lookout for game. An old-timer once told me, "You have to hunt as if there's a buck in every woodlot."

## Prep for Fast Shooting

Jumping animals is routine while still-hunting, but you can still strike with success if you're prepared. Whether you hunt with a bow or gun, know how to get your weapon up and on target in a split second. Practice this until it's smooth and second nature.

## Walk a Grid

In flat, heavily wooded terrain, it's easy to lose your bearings. To cover ground effectively, map your routes so you don't double-hunt areas, wasting valuable hunting time.

## Ease Your Mind

Still-hunting is extremely boring if game activity is low. But one way to break this monotonous state is to capture your thoughts on paper; that is, to take notes about work, hunting or family issues. Your mind has a way of thinking clearly amid the tranquility of nature, and a wallet-size notepad can be drawn from the pocket slowly and quietly.

A stylized signature of Joe Bell.

JOE BELL

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# news

## Reloading Saves Money



WHILE TODAY'S GUN STORE shelves are filled with all manner of ammunition for every caliber and every type of shooting, many shooters are not content to go with over-the-counter production ammo. Many, in fact, prefer to handload their own cartridges. But there are many reasons for reloading and ShooterSurvey.com recently polled recreational shooters and hunters to find out exactly what the top reasons are.

By far, the top response was to save on the expense of buying production ammunition, which can sometimes cost several dollars a round. In fact, 85 percent of those surveyed cited "to save money" as the main reason they handloaded.

Sixty-seven percent of those polled cited improving accuracy as a top reason, while 44 percent do it to obtain calibers or loads that are hard to find in stores. Lastly, 30 percent reload to reduce waste and 15 percent cited other, unspecified reasons for handloading. Respondents could choose more than one answer as many have multiple motivations for loading their own ammunition.

"With shortages of some types of ammunition in recent years, as well as the corresponding higher costs that arise

when demand increases, it is no surprise cost savings are the primary reason many shooters choose to reload," says Rob Southwick, president of Southwick Associates, which designs and conducts the surveys at HunterSurvey.com, ShooterSurvey.com and AnglerSurvey.com.

"But marketing efforts by smart reloading companies will acknowledge the other reasons why people reload."

To help continually improve, protect and advance hunting, shooting and other outdoor recreation, all sportsmen and sportswomen are encouraged to participate in the bi-monthly surveys at HunterSurvey.com, ShooterSurvey.com and/or AnglerSurvey.com. Every other month, participants who complete the surveys are entered into a drawing for one of five \$100 gift certificates to the sporting goods retailer of their choice.

About AnglerSurvey.com, HunterSurvey.com and ShooterSurvey.com: Launched 2006, AnglerSurvey.com, HunterSurvey.com and ShooterSurvey.com help the outdoor equipment industry, government fisheries and wildlife officials and conservation organizations track consumer activities and expenditure trends. Survey results are scientifically analyzed to reflect the attitudes and habits of anglers and hunters across the United States.

## High-Schoolers Dig Trap Shooting

THE MINNESOTA STATE High School League (MSHSCTL) sponsored 45 activity programs in the 2013-2014 school year and is one of the most comprehensive programs of interscholastic activities in the United States. The clay-target activity led all activity programs with a 79 percent increase in participation over the previous school year and is ranked 17th amongst the top participation of sponsored activities.

The participation increase of other top activities over the previous school year included Girls' Dance (21%), Girls' Volleyball (6%), Girls' Cross Country (6%), and Boys' Nordic Skiing (6%).

"In 2010, the League had 340 participating student athletes," says Jim Sable, executive director of the MSHSCTL. "By almost doubling the League participation this year, more schools and their student athletes are discovering how fun and safe shooting sports really are," Sable says. "Since 2001, the League has no reported injuries or school gun-free zone violations and it is the only co-ed and adaptive sport in high school."

With more than 8,000 student athletes expected to participate in the clay target league in 2015, additional shooting ranges are expected to participate and many current shooting ranges participating in the program are improving their facilities.

The Minnesota Department of Natural Resources has approved nearly \$400,000 in expedited small-range trap-shooting grants to expand, improve or upgrade trap-shooting ranges across the state. The grants are the result of a \$2.16 million legislative appropriation earlier this year that aims to increase shooting range capacity for youth trap shooters by providing matching funds to recreational shooting clubs open for public use.

The USA High School Clay Target League is a 501(c)(3) non-profit organization and operates the Minnesota State High School Clay Target League as the independent provider of shooting sports as an extracurricular co-ed and adapted activity for high schools and students in grades six through twelve who have earned their firearms safety certification. The League's priorities are safety, fun and marksmanship—in that order.

For more information, visit [MnClayTarget.com](http://MnClayTarget.com). **MP**



# gear

## SHOWCASE

### RELENTLESSLY TOUGH SHELTER

Some tents handle high wind well, others do not. Cabela's new Instinct backpacking tent happens to be one of those bomb-proof shelters, capable of withstanding some of the toughest conditions Mother Nature can dish out. The tent features a special Frame Tensioning System, which also gives it easy-setup performance, and it comes with a rain-fly that is constructed of 20-denier nylon taffeta ripstop with a 1,200mm polyurethane and silicone water- and fire-resistant coating to protect you from the elements. Other great specs include all-aluminum DAC Featherlite NSL poles, gear loft, and a 30-denier nylon taffeta bathtub style floor fabric, using water-beaded, fire-resistant 1,500mm polyurethane material. Sleeps three; weighs 5 pounds, 4 ounces; floor size is 7 feet, 3 inches; center height is 44 inches. **\$350**

> Visit [Cabelas.com](http://Cabelas.com)



### DESIGNED FOR COMFORT & PERFORMANCE

Russell's long-standing McIntosh Birdshooter boot is now available with a higher quality leather, a version that comes with highly water-resistant shrunken-grain American Bison (that features a showy grain and texture pattern, available in a rich chocolate brown, cognac or black); and another version featuring soft, supple, lightly oiled tan Muleskin leather, trimmed in chocolate German Elk. Muleskin is a brand new leather ... one that has the look of suede, but far greater water-resistant qualities. Right out of the box it offers surprising water resistance. The boot still features its lightweight, single-vamp, 7-inch upper, fitted with a Vibram Airbob sole. **\$433 to \$455**, depending on model.

> Visit [RussellMoccasin.com](http://RussellMoccasin.com).



### SERIOUS BLADE

CRKT's Hoodwork Survival knife is made of high-carbon steel for ruggedness and durability, and it can withstand all that Mother Nature can dish out, including wind, rain and sleet. Each knife is hand-crafted and includes a corrosion-resistant ceramic coating. The scales are removable so you can lighten the load and wrap the handle with paracord. Specific features include 6.130-inch overall length, 1095 high-carbon 56-58 HRC steel, 0.160-inch blade thickness and 4 ounces in overall weight. The knife has an acid-etch, sand-blast-ceramic coating. **\$295**

> Visit [CRKT.com](http://CRKT.com)





## SURVIVAL TOOL FOR YOUTHS

Every youngster wants to be like their favorite grown-up. Now, when it comes to working in the field with their mentor, they can utilize a tool specifically designed for them. It's called the Leatherman Leap, and it's a multi-tool designed specifically for youths. To maximize safety, and depending on the capabilities of the youngster, it can be used with or without a knife blade. The other tools are pretty much what you'd find in the adult version, including pliers, a ruler, wire cutters, tweezers and a bottle opener. Built-in safety locks make sure fingers and tools don't run into one another. **\$40**

> Visit [Leap.Leacherman.com](http://Leap.Leacherman.com)

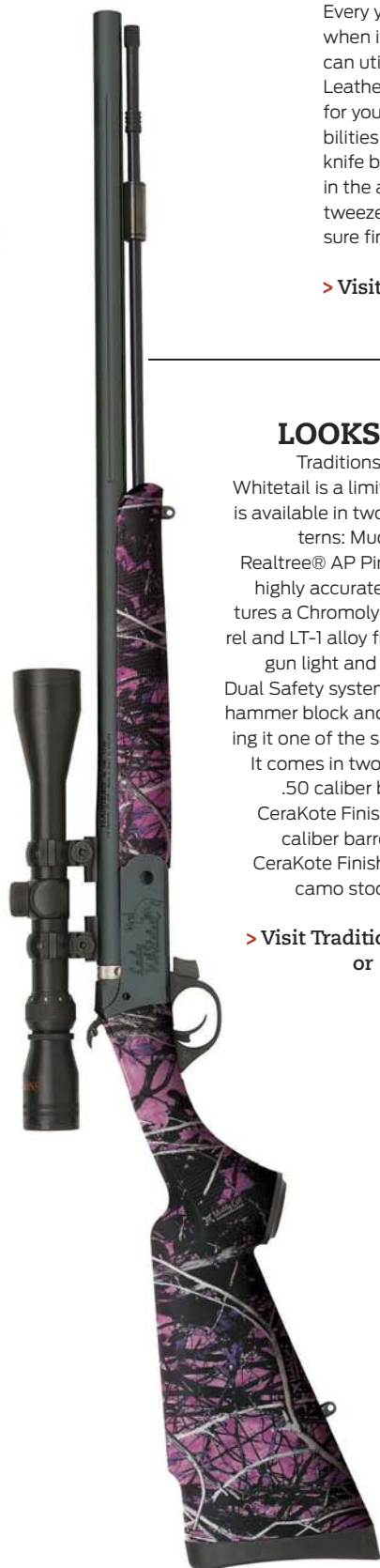


## LOOKS THAT KILL

Traditions Firearms' new Lady Whitetail is a limited-edition rifle that is available in two popular camo patterns: Muddy Girl® Camo and Realtree® AP Pink Snow Camo. This highly accurate muzzle-loader features a Chromoly tapered, fluted barrel and LT-1 alloy frame that keeps the gun light and balanced. The gun's Dual Safety system includes an internal hammer block and trigger block, making it one of the safest on the market.

It comes in two offerings: a 24-inch .50 caliber barrel with Premium CeraKote Finish, and a 26-inch .50 caliber barrel with Tactical Grey CeraKote Finish and a Muddy Girl® camo stock and forend. **\$440**

> Visit [TraditionsFirearms.com](http://TraditionsFirearms.com), or call 860.388.4656



## ENOUGH TO SURVIVE

The Family Road Guardian auto survival kit has enough "goodies" to get you through a tough blizzard situation or a delayed 72-hour emergency if you were to become stranded somewhere along a remote roadside. The kit has enough food to feed a family of four for one day, and gear for a variety of survival situations. Specific items include: food (has a five-year shelf life), emergency light sources (candles, light stick, radio/flashlight), shelter and warmth (survival blankets, poncho fleece blanket, tube tent), tools (paracord, knife, goggles, sewing kit, gloves, tow rope), and hygiene/first aid supplies (waste bag, tissues, hygiene kit, first-aid kit). Also includes a deck of cards and a notepad and pencil. **\$199**

> Visit [Survival-Gear-USA.com](http://Survival-Gear-USA.com)







# Emergency Kits and Training

Before your next outing, take a wilderness first-aid class. > By Tony Nester

*“Your best remedy for a snakebite is your car keys. Don’t waste time: Time = tissue.”*

If you spend enough time in the wilds, chances are you will one day have to contend with a trauma or debilitating injury. Having some wilderness medical training and a high-quality first-aid kit designed for remote conditions will put the odds in your favor until rescuers arrive.

There are many outstanding workshops available, and I highly recommend augmenting your wilderness skill set with at least a two-day wilderness first-aid course. You will learn how to stabilize injuries and improvise, MacGyver-style, with sticks and duct tape. These are good things to know for both urban and wilderness settings. If you are a parent, you will be glad to have such training, as these classes go way beyond a standard American Red Cross class, which assumes the emergency room is a short drive away. Before your next outing, take a hands-on wilderness first-aid class with the Wilderness Medicine Institute or Wilderness Medical Associates, both of whom have an advisory board of ER doctors unlike some of the smaller companies.

If nothing else, buy a copy of the book “Where There Is No Doctor” and study the chapters on hypothermia, heat-stress and waterborne illness as these are the more common ailments you may have to face.

Finally, purchase one of the better first-aid kits from either Remote Medical or Adventure Medical Kits. This will be your first line of defense for handling debilitating sickness or injury. These kits are far superior to the generic medical kits jammed with rainbow-colored Band-Aids found at the pharmacy.

PHOTO BY THINKSTOCK

Trauma kits, like this one made by Voodoo Tactical, are designed for gunshot wounds and large-scale trauma. Such a kit should augment and not replace a high-quality wilderness first-aid kit, which is intended to cover a broader range of ailments and injuries.



An Adventure Medical Kits first-aid kit carried by the author. These are designed for rugged use and come with a wealth of dressings and meds beyond what would be found in a typical urban first-aid kit.



## Upgrading Your First-Aid Bag

To further refine my kit, I've added the following items:

- ACE or Vet Wrap (it's hard to find stretchy fabric when you need it)
- PriMed Gauze (the best gauze on the market for dealing with intense bleeding)
- Triangular bandage (myriad uses for tourniquets, slings, headwraps, straining water)
- Temparin (temporary dental filling; tea candles and chewing gum will also work)
- Benadryl (critical for bug bites and anaphylactic shock; get the Fast-Melt kids version)
- Steri Strips (for closing wounds until you can get stitched up by a doctor)
- Irrigation syringe (a must-have item for first-aid kits; great for blasting the nasty germs out of wounds)
- Imodium (for diarrhea from drinking foul water or someone in the group who is lax on personal hygiene)
- Tweezers (get a quality pair with thin, flat-nosed tips for removing splinters)
- Duct tape (for instant Band-Aids, covering blisters, fixing gear and a hundred other uses)
- Wet Wipes (or something similar to assist with hygiene)
- Personal prescription medications (bring a two-week supply of extra meds if you are going on a multi-week trip or remote international travel)

Will this make you into a combat medic? Absolutely not, but it will equip you to better handle the injuries that are often associated with wilderness mishaps until you can get to the front-country.

## Extended Trips

If I am traveling internationally or within the U.S. for extended periods, I also add the following prescription items to my first-aid kit. Obtaining these involves a conversation with your family doctor about the associated hazards in the region where you are heading.

- Broad-spectrum antibiotic pills: This is to handle traveler's diarrhea or infections.
- Vicodin or similar painkillers: If you wrench your neck or bust a kneecap and are two days from the nearest village clinic, you will be glad you had something stronger than ibuprofen.
- Epi-Pen: I only bring these because I guide clients in the wilds and never know who "forgot" to mention something on their health form.

## Snake Bites & Large Wounds

The two questions I get asked the most during lectures on first-aid kits in my survival classes are:

"How come you don't have a snakebite kit?" and "Do you ever recommend stitching someone up Rambo-style, or in carrying one of those veterinary staple guns the sporting-goods stores sell?"

Regarding snakebite kits, I don't carry one, as they are largely marketing hype designed to sell an unneeded piece of gear to the unsuspecting hiker. Clinical field trials done by researchers at the University of Arizona have proven that you do

more damage to the immediate tissue of a snakebite victim by applying a suction device than if you had left the extremity alone. Don't apply ice, a tourniquet, a compression wrap or attempt the Hollywood cut-and-suck method.

Your best remedy for a snakebite is your car keys. Don't waste time: Time = tissue.

Proper wound care involves washing off the bite site, covering with a bandage and getting the victim to the hospital. Statistically, out of the 6,500 rattlesnake bites in North America each year, there are only five to six fatalities.

Also, 30 percent of rattlesnake bites are dry, so you may not have gotten envenomed. A bite may show two puncture marks on the skin or three, because the snake has a new fang growing in, or just one due to the snake breaking off a fang during a recent kill.

Remember, the golden rule of wilderness travel: Don't put your hands or feet where you can't see, and you will avoid most rattlesnake encounters. On a side note, a dead rattlesnake can still bite you long after it's been squished on the highway. The bite reflex within the nervous system is still intact for several hours after the snake's demise, so don't pick one up lusting after a shiny snakeskin belt.

As for stitching up your buddy's wound or using a veterinary staple gun, it will only help to ensure that the soon-to-be gangrenous limb has a

cool permanent tattoo if he survives the massive infection that you will be sealing inside. Getting stitched up by an ER doctor under clinical conditions is challenging enough and often accompanied by a round of antibiotics to combat the ever-present threat of infection. Transport that same medical issue to an austere setting like the backcountry, and you will be stepping into the world of Civil War medicine with the odds stacked against you.

Along those lines, you will also want to skip the cowboy approach of cauterizing the wound with hot rebar. Instead, use good wound-care management by cleaning the immediate area in and around the wound, wrapping it with gauze, and then evacuating the patient. If possible, use steri-strips instead to secure a laceration. This will allow the medical staff at the hospital to soak the strips and remove them without significant disturbance to the wound, unlike duct tape or a vet staple gun. You have a 12- to 24-hour window to get to the hospital to get stitched up. There is also another window around the four-day period. Besides those times, keep the wound clean, change the dressing daily and get the patient to the front-country ASAP. **MP**

Tony Nester is the author of numerous books and DVDs on survival. His school, Ancient Pathways, is the primary provider of survival training for the Military Special Operations community. He has served as a consultant for the NTSB, FAA, Travel Channel and the film *Into the Wild*. For more information, visit [APathWays.com](http://APathWays.com).



# Your Own Broadheads

Save money and enrich the bowhunting experience by crafting your own broadheads out of ordinary spring steel or saw-blade material. > By **Darryl Quidort**

If you're a bowhunter, you have probably noticed that broadheads have greatly increased in price in the last few years. Some heads now cost \$30 or more per head. I have always believed proper shot placement and sharpness to be more important than the size, style, or cost of the broadhead. Making my own broadheads not only saves me money, but it allows me a deeper involvement in bowhunting and leads to a greater sense of accomplishment when success is achieved. Besides, it's fun to make my own hunting heads.

## Broadhead Must-Haves

There are three requirements to consider when making a broadhead for hunting big game.

1. It must be wide enough to cut enough tissue to produce a quick, clean kill.
2. It must be narrow enough to penetrate well.
3. It must be of a shape that can be sharpened well. Believe me, over the past century or so all the tests have already been done. I suggest sticking to a proven design.

The book, *The Bowyer's Craft*, by Jay Massey, inspired me to try my hand at making my own broadheads. Jay wrote, "I prefer a simple triangular shaped broadhead, primarily because it is the easiest of all to sharpen. For width, I want nothing less than one inch, nor greater than one and one-quarter inches. To me, the ideal shape of a single-bladed broadhead is roughly one and one-eighth inches wide and just over two inches long. It is made of steel that is at least .050 inches thick and has a ferrule which runs to within one inch, or less, of its point."

For broadhead material, Jay wrote, "Spring steel, properly tempered, is the best for big-game hunting. The material I use is two-inch wide banding steel which is frequently used to band bundles of cargo. The steel is roughly .060-inch thick and can be heat treated to hold a razor-like edge."



PHOTOS BY AUTHOR

*"I have always believed proper shot placement and sharpness to be more important than the size, style, or cost of the broadhead."*

I haven't been able to find banding material like Jay described. However, I've used steel from old hand saws, which is excellent steel, and they can be easily obtained at garage sales. Hand saw steel is .040- to .050-inch thick and the

broadheads I made from it weighed 140 grains. Old skill saw blades also make great broadheads. The skill saw blades I've used were .060-inch thick and my finished broadheads weighed 160 grains.



Old skill saw blade showing rough triangles and ground down triangles.

# SUCCESS IN THE FIELD

> Last fall, I slipped into the woods one morning carrying my bamboo-backed hickory bow and wearing a back quiver containing cedar arrows tipped with my own handmade broadheads. The stand I chose was on a side hill just above a bench where a well-worn deer trail passed only a dozen paces in front of me. Once stationed, I nocked an arrow and waited.

After an hour vigil, a nervous acting doe appeared to my left. The unstable breeze had apparently warned her of danger. Instead of using the established deer trail leading into my shooting lane, she opted to use the thick brush just behind me for her passage. As she ghosted past, I silently turned, drew to anchor, and released the arrow, all in one fluid motion. The deer simply bounded away with her white tail flagging as if I had missed. But there, stuck in the hillside, was my arrow, the turkey feather fletching now crimson.

Later, I followed the red drops around the hill until I spotted her ahead of me, lying as if asleep. It was as if she had never even felt the sting of the razor sharp handmade broadhead. —D.Q.

This whitetail doe was cleanly taken by Darryl with a simple but deadly handmade broadhead.



## Design a Pattern

To make broadheads from a skill saw blade. First, use a cold chisel to break rough triangles out of the saw blade. Score them with the chisel, then bend them in a vise to break them off. A dremmel tool can also be used to cut them out. Grind the rough triangles to shape. Mine are 1¼-inches wide and 2-inches long. Be sure to wear safety glasses when doing any cutting or grinding.

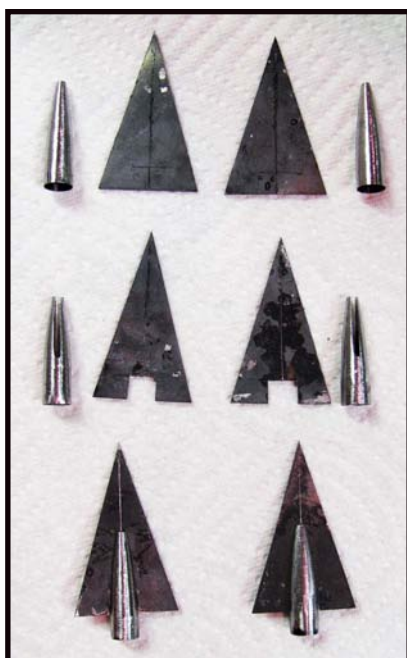
The hard steel may need to be annealed to soften it enough to work with hand tools. To do this, heat the triangles to red hot with an acetylene torch and allow them to slowly air cool, or put them in the coals of a hot campfire for an evening and let it burn out overnight.

The easiest solution for a good ferrule comes from Jay's book. Simply mount a regular 125-grain field point on a short arrow shaft and grind it down to a narrow bullet shape. Keep turning the point, while grinding, until it weighs about 60 grains. File a small flat tip on it and cut the slot for the blade with a hacksaw. For a .060-inch-thick blade use two hacksaw blades taped together. The 5-degree internal taper is already formed to fit perfectly on the arrow shaft.

## Final Touches

Next grind the blades to their final shape, and grind the bevel on the edges. The broadheads can be made single or double beveled. Be careful not to overheat the blade while grinding. The blade should now weigh about 100 grains.

Scratch a centerline on the blade, from the base to the tip, to help in alignment of the ferrule. Hacksaw out the base of the blade to fit the ferrule. Use a file to carefully hand fit each one to ensure straight alignment. Assemble the parts and tap the saw cut in the ferrule tightly closed on the blade.



**Steps of assembly. Top row shows the ferrules and the blades after grinding. The center row identifies the ferrules with a slot cut in them to accept blades. The blades are then notched to accept the ferrules. And, finally, the assembled parts ready to be drilled for rivets.**

(below) Author's method of drilling the head for the rivet.



## Allow for Precision

After assembling the parts, drill through them with a drill bit slightly larger than a small finish nail. It's important to have the ferrule perfectly aligned on the centerline of the blade when they are drilled. Mark the curved surface of the ferrule with a punch to start the drill bit properly. Use a wooden block, carved out to hold the ferrule, so that the blade lies flat and steady for drilling.

Use a finish nail as a rivet to lock the parts together. Peen the nail over smoothly by placing the broadhead on a hard surface and tapping the cut-off nail down with a ball-peen hammer. A small file can be used to smooth up the rivet.

## Spin Test Each Head

Mount each broadhead on an arrow shaft and spin it to be sure it is straight and there is no wobble. A little filing may be necessary to straighten the head or bring it to the final desired weight.

## Protect from Rust

Use cold-gun bluing solution to color the heads and protect them from rust. Give them a final sharpening with a flat file, hone the edge to razor sharpness with a butcher's steel, and your broadheads are ready to go hunting.

Check your state game laws to be sure this style of broadhead is legal where you hunt. Some states require the base of the head to be less than 90 degrees to the ferrule to ensure they are not "barbed." This can easily be done when grinding out the triangles.

Making your own equipment adds an extra dimension to any endeavor. I call my broadheads "handmade" not "homemade." Homemade sounds inferior somehow. Handmade rings of true quality craftsmanship. I have successfully used these broadheads on big game and find them just as deadly as any "store-bought" broadhead. **MP**



# [Self-Reliance]



*“Genius is one percent inspiration and ninety-nine percent perspiration.”*

—THOMAS ALVA EDISON

PHOTO BY THINKSTOCK



# Quick and Easy Maple Syrup

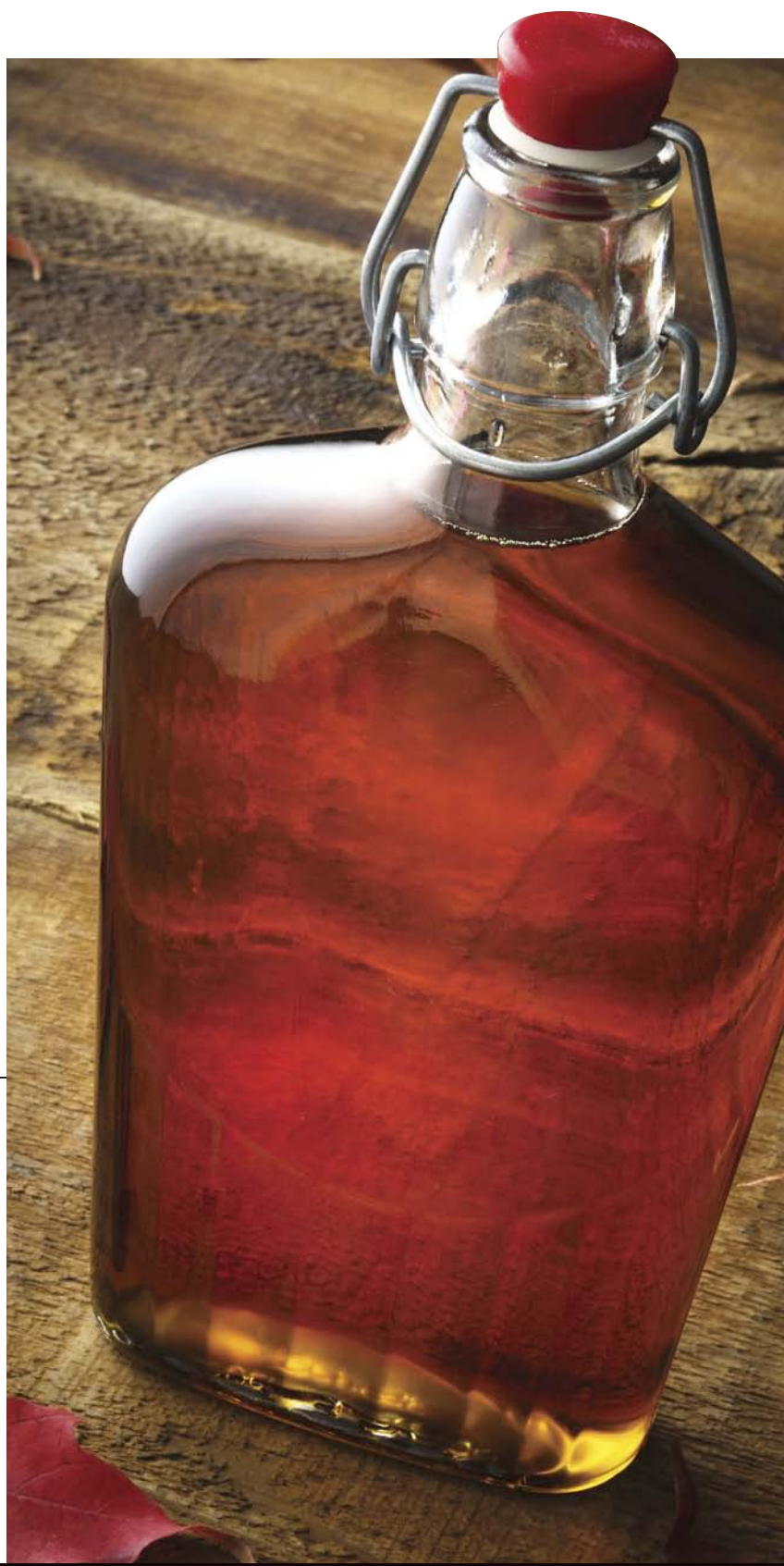
A DELICIOUS TOPPING MAY BE RIGHT IN YOUR OWN BACKYARD.

By Jason Houser

**D**eer season has been over for a few weeks now. Spring turkey season is approaching, but not quick enough. If you're anything like me, the winter blues are beginning to take their toll. It's a good time to try a new seasonal project: making maple syrup.

You might not live in Vermont, a state known for its pure maple syrup, but what you need may be right outside your own back door.

It does not take many maple trees to produce enough maple syrup to supply family and friends with sweet syrup all year long, and it's a lot easier than you think. The supplies needed are few and can easily be obtained from large maple-syrup producers or from the Internet.







**(above)** After drilling a hole using a  $\frac{7}{16}$ -inch bit, about two inches into the tree, insert the spile to access the sap.

**(left)** A properly positioned spile, placed on the south-facing side of the tree, should flow. If not, then the weather is too cold or the spile hole needs to be deeper.

**(above, center)** There's nothing like collecting sugar sap during the dead of winter.

**(far right)** Once you have a bucket full of sap, you're ready to boil it so that it can be converted into syrup.



## Where to Get It

Sugar maples are the preferred choice of trees when gathering syrup. The sap from a sugar maple contains more sugar than the sap from a soft maple, like silver or red maples. Even though the soft maples have a lower sugar concentration, they will still produce a sweet syrup. The sap from a maple is thin, water-like and clear with a slight taste of sugar. It takes about 40 quarts of sap from a sugar maple to make 1 quart of syrup—and even more when the sap is from a soft maple.

## Drilling the Tree

To begin the process, drill a hole with a  $\frac{7}{16}$ -inch drill bit two inches into the tree at a slight incline on the south-facing side of the tree. Clean the hole out by taking the drill in and out of the hole a few times. Now, take a spile (a metal tap purchased just for this purpose) and put it in the hole and hang a clean five-gallon bucket on the tap. If the sap is not flowing, it's either too cold or the spile needs to go into the tree further.





It might seem that the sap is barely trickling from the tree. However, it's possible to collect as much as five gallons of sap from a single tree in just one day. Also, on large trees, two taps can be used. Do not miss a day of collecting sap, or you could end with buckets overflowing. When collecting the sap, take a very clean rubber container with handles to put the sap into. Once all the sap has been collected, store it in a cool place, like a refrigerator, as soon as you can. Do not store the sap for more than 48 hours before you begin the boiling process.

### Boiling the Sap

You cannot have syrup without boiling the sap. It's a long process, but it has to be done. I recommend having a full day to thicken the sap. If you do not get an early start, you will find yourself staying up late.

I use large soup pots to boil the sap. As you pour the sap into the pots, run it over a thin cloth placed in a strainer to remove any impurities. The same maple-syrup operation you purchased the spiles from will have filter clothes for this process as well as for the straining

process that will need to be done when the boiling is finished.

Unless you plan on making a lot of syrup, a kitchen stove and one or two big pots should suffice. Turn the stove burners on as high as they will go and begin the waiting game. A word of caution: Do not leave the syrup unattended on the stove. Overcooking could cause the syrup to crystallize, darken and thicken.

As the sap cooks down, add more sap to the pot. Over time, it's a good idea to move the sap to a smaller pot so it is easier to work with. Once the sap reaches 219-degrees Fahrenheit on a candy thermometer, it will have small bubbles in the boiling. The sap is now syrup. Even though it is thin, it is still syrup. Once the syrup reaches 219 degrees, remove it from the stove. Use thick felt to filter the syrup into canning jars and seal the lids tightly.

As I mentioned earlier, the spiles and filter cloth can be found online or from other syrup producers. The buckets can be found locally. Thoroughly clean the collection buckets and the rubber-transport buckets to prevent bacteria growth.

Maple-syrup collection only lasts for a couple of weeks. Once the trees begin to bud, maple-syrup harvest and production is over for another 11½ months. All you can do until then is enjoy 100-percent pure maple syrup that you collected from those gray maple trees outside your home. **MP**

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*“Sugar maples are the preferred choice of trees when gathering syrup.”*

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· HOW-TO ·



# Gardening Options

WHETHER YOU HAVE LOTS OF SPACE OR VERY LITTLE, THERE ARE MANY CHOICES AVAILABLE. *By Paul E. Moore*

**V**egetable gardening is a tremendously rewarding endeavor for multitudes of people. Not only is it very therapeutic but much satisfaction is derived from planting, cultivating, harvesting and ultimately consuming vegetables grown with a personal labor of love. It's a mainstay of rural families and with keeping a kindred spirit with our ancestral pioneers.

But gardening isn't just for those with large parcels beyond the city limits. Gardening to some extent can be done almost anywhere and scaled to the available space. Heck, it doesn't even require having land in which to dig.

There are a lot of options available today and most everyone can test their green thumbs to some degree. No matter whether one lives in the country with an ample amount of space or in a city apartment with a small patio or just a spare window sill, growing plants is not out of reach. Even people with no space whatsoever have other options in some communities. The reward of growing and harvesting even on a small scale is better than not growing at all.

## Larger-Scale Gardening

The traditional garden is usually what comes to mind when gardening is discussed. The mental image is of a plot of tilled ground of varying size with different plants in neat rows. The picture that comes to mind is probably different from one person to the next and is formed by the individual's personal experience or exposure to gardening. Regardless, the traditional garden is by far the most common form, but the size varies greatly.

The size of the garden is not something to be taken lightly. In many situations, size is limited by the amount of available space. In these situations, folks often do not have enough room to garden on as large a scale as desired. The other end of the spectrum presents a situation in which there is ample room, but the gardeners need to take care not to







“bite off more than they can chew.” Gardening requires a lot of time and sweat equity, so it’s very important not to attempt a garden so large as to not be able to properly care for it. The results will be very disappointing and may actually sour future gardening endeavors.

Mini-farm is a term that has become quite popular among those embracing the pioneer spirit and a more self-sufficient lifestyle, but it is a relative term. A mini-farm means many different things to different people. It may mean growing fruits and vegetables, raising animals and more on parcels from half an acre to several acres. It is also used to describe backyard gardens, growing wine grapes, raising chickens for meat and eggs, or green house gardening.

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*“A mini-farm means many different things to different people. It may mean growing fruits and vegetables, raising animals and more on parcels from half an acre to several acres.”*

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### **Space-Saving Options**

Most of my formative years were spent in the city living in a house with a rather small yard. In fact, the backyard was little more than a strip some 15 to 20 feet wide between the back of the house and the chain link fence surrounding our property. Still my father would not be denied the opportunity to garden. Each year he hand-tilled a plot alongside the fence some 20 to 25 feet long. In this space he planted tomatoes, bell peppers, green onions and occasionally other vegetables. To support the tomatoes as they grew, he “borrowed” some of my mother’s crochet thread and tied them to the fence and to tobacco stakes, the wooden shafts used to haul cut tobacco from the fields to the barn and ultimately to market.

I always helped dad with his garden, but as I aged I took on more of an interest to expand our efforts. I found two unused out-of-the-way spaces on a side of the house and converted





each to small garden plots. I also discovered container gardening and had vegetables growing in small plastic tubs and flower pots. Now as an adult I live in a rural area and have all the space I could want for gardening, but even now I sometimes supplement my traditional garden with container plants, especially when growing herbs.

Container gardening is very popular for those with limited space. Flower pots and plastic plant containers are not just useful for petunias or marigolds. Numerous vegetables can be grown in them as well. In fact, an upside-down patio tomato package including plant and container has become quite popular in advertisements in recent years due to the interest in container gardening. Many stores that sell garden plants now offer tomatoes and other plants in pots with built-in trellises on which for the plants to grow or be supported.

The plants that grow well in containers are numerous, but success varies according to climate and how much care is put into the plants. Containers do not retain moisture as does the actual ground, so adequate water must be provided. Likewise, a container without proper

**(above) Raised beds work well for gardening in urban or suburban areas. Trellises can be added for plants that vine or need support.**

**(opposite, top) Larger gardens require a serious commitment, so be sure you don't take on more than you can chew. Start small and work your way up.**

**(opposite, bottom) Container gardening requires constant watering as plants can't draw additional moisture from the ground. At the same time, you must be careful not to drown the plant as well.**

drainage can hold too much water and the plants may die. Most container plants require daily monitoring to keep them in peak condition.

Containers work well for those with limited or no tillable space on the ground. They may be placed on patios or porches outside and some plants even work well inside the house or apartment in a window sill. Many homes have a complete herb garden growing in the kitchen window. Not only do the herbs provide fresh flavor when cooking, but the scent of the growing and fresh-cut herbs provides an aromatherapy like no other.

Do not be afraid to experiment with container gardening. One year, I purchased several large plastic tubs, cut holes in them for drainage and filled them with loose loamy soil. Next I planted potatoes and raised them to harvest, which was simple. I simply turned the tubs over, scattered the contents and picked out my potatoes. The yield was not as good as when planted in the ground, but there was no digging required. Not everything will work out as planned, but learning and gaining experience is part of the fun and provides ideas for changes next year.





Another option for those who do not desire to till the ground or do not have that as an option is to use raised beds. Most often, raised beds are seen in city and suburban locales where a traditional tilled garden looks out of place. A raised bed looks more aesthetically pleasing in the neighborhood and blends in with other landscaping.

Raised beds are generally constructed by first constructing a square or rectangular wooden frame, but sometimes concrete or rocks are used for the frame. The frame is filled with soil in which to plant the vegetables. Some folks even build or place a trellis in the raised bed for plants that vine or need to be supported by tying.

### Community Gardens

So for people stuck in the city with little to no space and limited options, all is not lost in some instances. In many locales, community gardens are starting to appear quite frequently. This may be worth exploring and if one is not available locally, perhaps it is time to take the lead and lay the groundwork (pun intended) for a new endeavor.

*“The plants that grow well in containers are numerous, but success varies according to climate and how much care is put into the plants.”*







Community gardens vary in size and scope, but most are sponsored by an organization. Sometimes the organization may be a church or club and the garden spot is only for members. In other areas a community garden may be just that; a garden for residents of a certain geographic area. In either circumstance, growing vegetables in a communal setting can have both positives and negatives.

The positive is obviously that it allows people without the space or opportunity to grow plants they otherwise would not be able. The downside is gardening together sometimes leads to squabbles over space, robbing harvest from others' plants, poor care of plantings or more. Community gardens may allow gardeners to have their individual areas to do with as they please or the entire garden may be a joint project with shared responsibilities and harvest allowances, the latter the least desirable due to possible conflicts.

My personal recommendation is to steer clear of shared spaces where the entire garden is a joint project. The old cliché that "10 percent of the people do 90 percent of the work" will most likely come to fruition fairly rapidly, thus leading to dysfunction, resentment and bickering. And it may not be simply because someone else is lazy or irresponsible. Oftentimes people do not understand how much time or commitment goes into gardening, health issues can impact the ability to work or a person's work or home situation may change leaving them without the available time. It is much less apt to be a problem if each person or family is responsible only for their own space.

## Permaculture

Another term that has been gaining in popularity and its original meaning being adapted to fit the moment similar to mini-farming is permaculture. It is a subject expansive enough that space here will not allow but a brief overview. And like mini-farming, the definition of permaculture to one person is something entirely different to another.

Wikipedia, the free online encyclopedia, states, "Permaculture is a branch of ecological design, ecological engineering, environmental design, construction and integrated water resources management that develops sustainable architecture, regenerative and self-maintained habitat and agricultural systems modeled from natural ecosystems." In simple terms, permaculture is taking an available space, analyzing it for the best possible utilization of resources and irrigation, and then planting in a systematic fashion to mimic natural growing conditions, but also to make use of water runoff, companion plants and more.



**(above, top)** Community gardens are becoming quite popular in some areas. If one cannot be located nearby, perhaps it is time to start one.

**(above, bottom)** The traditional garden can be any size space allows. Just make certain not to plant more than can be cared for properly.

## Time to Garden

Hopefully by now, reading this has planted a seed (another pun) and everyone is chomping at the bit to get started gardening. Spring will be at the doorstep in no time, so right now is the time to start planning for planting season. Do not let a lack of space be a deterrent. Whether planting an expansive garden on a large lot, something simple in the backyard or simply a container or two, gardening brings satisfaction and reward well worth the effort expended. **MP**



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· SPECIAL ·

# Snowshoe Primer

IF YOU'RE TIRED OF WADING THROUGH DEEP SNOW IN THE WINTER FOREST, STRAP ON SOME SNOWSHOES AND LET THE FUN BEGIN.

By Darryl Quidort

A two-day snowstorm had left the world around me looking like a Currier and Ives painting. Last fall's dead grass and weeds were gone from sight and the pine trees, now decorated with white, were as pretty as any Christmas tree. A blanket of deep snow covered the frozen ruts left by the farmer's chisel plow, allowing me easy sailing across the open field to the woods a quarter mile away. Picking up the pace to a speed where my elevated pulse and deep breathing seemed to level off, I glided smoothly along on my morning walk. My snowshoes made a rhythmic "shush, shush" sound as I traveled.

Entering a wooded area, I enjoyed walking among the trees with no underbrush to contend with. The summer birds had long since flown south. The winter birds—cardinals, chickadees, and nuthatches—seemed more interested in finding their breakfast than in me as I passed nearby. Winter transforms even familiar woods into something wonderful and new. As I moved along, the snow-covered pines seemed to absorb all sounds. It was as if I were floating through a silent world. "No noise pollution," I thought. "And no exhaust fumes." I was burning calories, not gasoline.

Leaving the woods, I faced the half-mile trek back home. Out in the open, I felt the cutting edge of the cold, winter wind. Pulling my stocking hat down over my ears, I pushed on. Facing a minor hardship, like a little wind, made me marvel at the historic accounts I've read about those tough Hudson's Bay Company men traveling hundreds of miles on snowshoes across the frozen northland. Native Americans of the north traveled on snowshoes for several months each year. Snowshoes are a traditional mode of winter travel.







### Anyone Can Do It

Times have certainly changed. Blame it on modern transportation, changing lifestyles, lack of opportunity, or just plain laziness, most people today seldom realize the benefits of snowshoes.

I'm often questioned about my snowshoes. "Aren't they heavy?" people ask. My reply is, "I don't know. I never lift them off the ground during use."

"Doesn't it hurt to have to walk bowlegged?" They ask. "Don't know. I've never tried it," I say. "It isn't necessary when using snowshoes."

"Aren't they awkward?" they'll ask. "They are if there isn't any snow! But, in deep snow they sure make walking easier," I reply back.

It's been said that, "If you can walk, you can snowshoe." It can be done anywhere that there is enough snow. Usually eight inches will suffice. In fact, over 500 American school systems now offer snowshoe programs in

(above and right)  
**What's best? Traditional or modern? Both have pros and cons, but older-style shoes provide more flotation compared to modern shoes of the same weight. Wooden frames are quieter in the snow as well, which is hunters favor them.**

their physical education classes to help combat obesity. In addition to the benefits of physical activity, fresh air, and beautiful winter scenery, I've often used snowshoes for hunting during the winter. My own rule of thumb is: if the snow is half way to my knees, I'd rather be on snowshoes.

### Snowshoe History

No one knows exactly when or where snowshoes originated, but we do know that throughout history many variations have evolved as needed to fit the local conditions. Although there is recorded history of snowshoe use for hundreds of years, they no doubt have been in use for much longer than that. Historic snowshoe use is believed to have been circumpolar.

Along with his bow and arrows, Otzi, the ice man found frozen in a glacier in the Alps in 1991, is thought to have been either wearing or carrying snowshoes when he died about 5,300 years ago.







Longer snowshoes are preferred for open-country use. Shorter snowshoes are more maneuverable in brush. Both pairs have similar square inches of lacing and will carry the same weight.

### Traditional or Modern?

There are two basic types of snowshoes today: traditional and modern. Traditional snowshoes have hardwood frames (usually ash) and rawhide or neoprene lacings to compact the snow underfoot and keep the user on top. Traditional snowshoes provide more than twice the floatation of a modern snowshoe of the same weight. The wooden frames don't freeze up and they are much quieter in use than the modern models. However, the rawhide lacings will eventually need some upkeep.

Modern snowshoes have lightweight metal (usually aluminum tubing) or plastic frames and use a plastic or nylon material for webbing in place of lacings. They may also sport teeth or claws for traction. They generally make more noise than wooden frame shoes during use. They usually require no care or upkeep and are usually cheaper in price as well.

## SHORT VS. LONG SNOWSHOES

> Shorter snowshoes, like the modified bear-paw style, are better for maneuvering in the thickness of the woods. Longer snowshoes, like the Alaskan style, are better for open-country traveling. In deep, soft snow a turned up front on the snowshoe allows the front of the shoe to come up out of the snow and slide ahead easier. I prefer snowshoes with "tails" on the back because they balance better on the foot, slide ahead easier, and don't throw as much snow up onto the backs of my legs. —D.Q.



## BINDINGS & HOW THEY WORK



Free-rotation bindings allow the heel to lift off the snowshoe and the boot toe to pivot down through the toe hole as you step ahead.



PHOTOS BY ??

> Bindings attach the snowshoe to your feet. The two basic styles of bindings are limited-rotation and free-rotation.

Limited-rotation bindings are only used on aerobic snowshoes. The entire boot is strapped directly onto the snowshoe, thus preventing the heel from lifting and preventing the tail from dragging. This type of binding is used for snowshoe races.

Free-rotation bindings are much more commonly used. They connect the boot to the snowshoe only at the crosspiece under the ball of the foot. This allows the toe to go below the snowshoe through the toe hole as the heel lifts off the snowshoe. The front of the snowshoe pivots up and the tail drags during use. —D.Q.

“...Each pound of weight requires one square inch of area (on each snowshoe) to support the user.”

### Pick the Right Shoe

There are three main types of snowshoes in use today, aerobic, recreational, and mountaineering. There are several styles, sizes, and shapes, of each type as well.

Aerobic snowshoes are the smallest. They are used for walking or running on groomed or packed trails and are not recommended for off-trail use. Recreational snowshoes are of larger size and are used for moderate off trail walking. Mountaineering snowshoes are large-sized shoes used for long distance, deep snow traveling or when carrying a loaded pack.

One common formula for choosing the size of snowshoes needed is, each pound of weight one square inch of area (on each snowshoe) is needed to support the user. Many manufacturers supply weight-based ratings for the different snowshoes they produce. Heavier users will require larger snowshoes to keep them afloat. Also keep in mind the weight of any gear you will be packing.

Make sure that the toe hole in the front of the snowshoe is large enough for the boot you will wear. The toe of the boot must go freely through the toe hole for the snowshoe to properly tip up and drag.

### Learning to Walk

Walking on snowshoes is not difficult, although it may take some conditioning before a person can go for long distances. When putting on snowshoes, the ball of the foot

The author and his daughter enjoy a winter walk on snowshoes.



PHOTO BY ??





PHOTOS BY THINKSTOCK

rests on the crosspiece with the boot toe over the toe hole. After fastening the bindings, the heel should be free to lift off the snowshoe and the toe should be free to tip down through the toe hole.

As you lift the knee to take a step, the snowshoe pivots on the crosspiece under the ball of your foot, the tail goes down and the front of the snowshoe comes up. Your toe slips through the toe hole as the front of the snowshoe tips up above the snow for the forward movement. You never need to lift the snowshoe off the ground and there is no need to walk "bowlegged." When you step ahead, the wide part of the snowshoe slides over the wide part of the opposite snowshoe and sets down ahead of it with the tail resting alongside the other snowshoe. The front of the snowshoe naturally comes up when you raise your knee for the next step, while the tail drags for balance. It is easier to walk in deep

**(above)** Long treks in deep snow aren't fun, especially when you're searching from one valley to the next for game. That's when a set of snowshoes can help.

**(below)** Snowshoeing can be a refreshing way to spend the winter outdoors.



snow than it is on a hard surface where the snowshoe can't pivot as needed.

Walking on snowshoes is easier than it sounds; however, while learning to walk on snowshoes falls into deep snow may occur. Although they may be humiliating, they aren't dangerous.

### Dress Right

The exertion of a trek on snowshoes will cause perspiration, which may chill you after you stop. Therefore, it's best to layer clothing so it can be removed or opened up while moving and closed or put back on when needed. A moisture-wicking under layer next to the skin also helps in this regard.

Snowshoeing is a great way to get some exercise right near home. There is a whole world of adventure out there waiting for you. This winter try snowshoeing for fitness and for the true enjoyment of winter. **MP**



A large, brownish-gold catfish is the central focus of the image, partially submerged in dark, murky water. The fish's head is on the right, and its body extends towards the left. The background is filled with tall, thin reeds or grasses that are reflected in the water. The overall tone is dark and moody, typical of a swamp or marsh environment.

· SPECIAL ·

# Art of Noodling

IF YOU SEEK REAL FISHING ADVENTURE, THEN TRY STICKING YOUR HANDS IN A DEEP DARK HOLE. *By Michael Pendley*

“**Y**ou gonna get your mind right.” This quote from the movie “Cool Hand Luke” pretty much sums up what it takes to noodle a big catfish. First-time noodlers often stand at the entrance of a catfish den for what seems like an eternity while they “get their mind right” and convince themselves that there is nothing to fear in the dark murky water below. The look on a person’s face the first time they overcome their fear and reach into an underwater crevice is priceless, as is their reaction when their exploratory search is met, head on, by an angry catfish. ➔





There's nothing like catching a lunker cat using nothing but your own two hands. This is the author with his largest catch to date.



---

*“Because the catfish remain in these nest holes for an extended period, there is a window in which they can be caught by hand.”*

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Noodling, also known as hand fishing, grabbing, grueling, hoggin, tickling and a host of other names, has been around since the Native Americans. It was used as a source of inexpensive food during the Great Depression and has evolved into a sport, complete with tournaments, television coverage and prize money.

### **How To Do It**

The act of noodling itself is a simple one. Each spring, when the water temperature rises above 70 degrees Fahrenheit, catfish seek out underwater cover in which to build a nest and lay their eggs. In order to obtain maximum protection from egg- and fry-eating predators, these nests are normally built in sheltered holes with only one or two entrances. Because the catfish remain in these nest holes for an extended period, there is a window in which they can be caught by hand. A noodler swims down to the entrance of the hole, reaches in with one or both hands, grabs the catfish and hauls it back to the surface. Because of the catfish's protective instinct, it will often rush out and bite the hand of the noodler, making the act of catching it that much easier.

Flathead catfish (*Pylodictis olivaris*) have traditionally been the main quarry of the hand fisherman. These fish can reach enormous sizes, often in excess of 100 pounds. Other catfish species, including blue (*Ictalurus furcatus*) and channel (*Ictalurus punctatus*) can also be caught by hand during the spawning season, but aren't as prized as their flathead cousins.

### **The Right Location**

What makes a good location for noodling a giant flathead? Catfish cover can be just about anything. Natural cover like undercut banks, submerged logs, rock piles, brush piles and root wads can all hold fish. Don't overlook any opening, no matter the size. Large catfish often pile rocks and gravel at the

entrance of a larger hole in order to make it easier to defend.

On large reservoirs, the water level is often drawn down during the winter in order to make as much room as possible for spring rains. These low-water periods make a great time to burn some shoe leather and walk the banks. Look for any cover that might be under water when the reservoir's water level is at its springtime high. Don't be afraid to pile some rocks or move a log or two to make a spot more appealing once it is flooded. Mark these areas by triangulation to easily identifiable landmarks or, better yet, on a GPS.

Barring access to low-water scouting, just head out and feel around. If you are working your way around likely cover and feel a possible entrance to a catfish den, stick your foot in or push a stick into the hole to see if it goes back far enough to hold a fish. If you are lucky, there will be a fish inside and he will leave no doubt that he is home.

Many catfish noodlers like to sweeten an easily accessible area with manmade cover. Old bathtubs placed upside down, barrels, concrete or wooden boxes, or anything of the like can be used as manmade catfish dens. If you go this route, be sure to okay it with the owner of the impoundment or any federal or state authorities that might control the water. Make sure to monitor the added structure and remove any unfastened parts that might wash free from the rest. Loose manmade cover is just litter.

Another type of manmade cover that can hold lots of fish is concrete slabs that have been dumped along lake edges to slow erosion from waves. Often these slabs rest on one another to form hollow areas underneath. Pick your way through these piles carefully, feeling for open caverns between the slabs or cavities washed open by waves and currents under the concrete.

Lakes, rivers, big streams and even some larger ponds can all hold flathead populations.





The author's friend, B. Rogers, with a trophy flathead.





River systems in particular are likely to have undercut banks on the outer edges of their curves. River and creek systems often contain root wads that the current has undercut. Use these prime places to locate a big fish.

### Gear to Use

The gear needed for a day of catfish hand fishing is simple. Don some shorts and an old pair of tennis shoes, and you are ready to go. Gloves are a touchy subject among catfish noodlers. There is a camp that claims using gloves is cheating; go bare-handed or go home. While I'm noodling, I, myself, like to wear a pair of cotton gardening gloves, the style with the rubber coated palms. Catfish have rows of tiny teeth, and they feel like sandpaper when you run your hands over them. Since big flatheads like to twist and thrash around when you grab them, gloveless hands often come out looking like you fought a meat grinder. The gloves help maintain a grip on the slick fish as well.

### Using the Right Technique

Once you have a likely catfish den located, it is time to come up with a game plan for getting the fish out. Feel around the den, often there will be more than one entry. If you find another exit point, block it by having a buddy stand with his or her feet in the entry, or place a large rock or two over the hole to prevent escape. Now is the time for getting your mind right. Take a deep breath, dive down and stick your hand into the crevice. As mentioned earlier, and if you are lucky, sometimes a large catfish will rush out and grab your hand. Simply wrap both hands around its lower jaw, grip tightly and ease the fish out of its den. As the fish comes free, many noodlers prefer to wrap their legs around the fish's body to help hold the fish and prevent it from thrashing around and dislodging the grip.

Some catfish can be stubborn about getting caught. Often, you will feel the fish in the den, but it won't bite your hand or allow access to its head. This is especially true for fish that have been caught and released before. These fish can take a bit more effort, but are still catchable. A 3- to 4-foot long piece of wooden dowel or broom handle can be a handy tool for extending your reach and herding a stub-

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*(top to bottom)* Noodling veteran F. Stephens goes shoulder deep in a catfish den. Remember, you can use one or two hands to grab the fish. 🐾 Catfish have teeth, and they can thrash about once you grip onto them, so it's wise to wear thick gloves of some kind. The author favors cotton gardening gloves with rubber-coated palms. 🐾 You know you have a good fish when it takes two fishermen to hold it.



born cat to the entrance of the den so that it can be grabbed. Onto the end of the dowel or broom handle, many noodlers install a blunt screw-in hook, the kind you would use in a garage to hang things from. This hook can be used to gently snag the fish by the lower gill plate or bottom jaw and guide it into reach.

### Work in Teams

One of the most important safety factors when attempting to noodle catfish is to never do it alone. While one person dives and searches for fish, the other can stand nearby and watch for any signs of distress. In the unlikely event that the diver requires help, the partner can be there to assist a safe return to the surface. The biggest dangers often encountered during a day of noodling are sunburn and the scrapes and scratches you get from rooting around under the water. A quality sunblock designed for swimmers should be applied often. A quick rinse with hydrogen peroxide at the end of the day helps to clean any open wounds a hand grabber might incur.

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*“One of the most important safety factors when attempting to noodle catfish is to never do it alone.”*

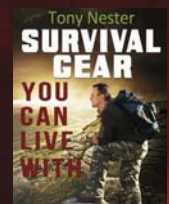
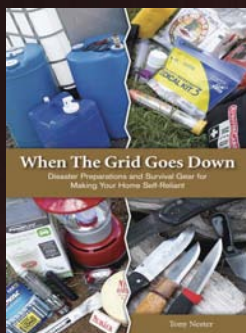
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While snapping turtles and venomous snakes might occasionally be encountered, they seldom stick around in the presence of splashing and wading people. Leave them alone and they will normally return the favor.

Finally, a note on conservation. Flathead catfish can live to be more than 20 years old. While a few fish may be sexually mature at four to five years old, many don't reproduce until they are several years older. Breeding flathead catfish can be a vulnerable resource. Most noodlers are all for a fish fry from time to time, but conscientious fishermen take care not to injure the fish they catch. Often, the same fish can be caught multiple times over a season if they are carefully released to return to their den.

While some practices, such as sharpened gaff hooks and ropes run through the gill opening of fish in order to secure them, are common in certain areas, both of these methods can injure a valuable breeding fish to the point that they cannot be safely released. Do the species a favor and stick to your hands. **MP**

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# Saugers and Winter



DON'T LET COLD WEATHER STOP YOU FROM CASTING OUT. THERE'S GREAT ADVENTURE TO BE HAD PURSUING THIS UNIQUE RIVER FISH.

**By Paul E. Moore**

**N**ot everyone thinks of fishing as a year-round activity. In fact, a good many people view fishing as strictly a spring and summer pursuit, and in many minds, only then if conditions are perfect. The latter group is often referred to as "fair-weather fishermen." There is obviously nothing wrong with that, because we do not all have the same desires or fish for the same reasons. To each his own, as it is said.

However, whether one fishes for fun or food or a combination thereof, a whole realm of opportunity exists for winter fishing. In northern sections of the country, that obviously means hardwater fishing, and there are numerous species of fish available to be pulled through an ice hole, ranging from the diminutive bluegill to huge northern pike. In open water, species such as smallmouth bass and trout are more than willing to stretch an angler's line in the wintertime. But for real fun, consistent action and a superb addition to the dinner menu, it's hard to beat winter sauger fishing.



## Where They Are Found

Saugers are primarily a river fish and, as such, are long and thin, streamlined and well-suited for navigating river currents. They are in the same family as walleyes, although they are much smaller. But whereas walleyes utilize the entire water column, saugers prefer the depths and spend most of their lives hugging the bottom.

Saugers are not normally found in lakes that are not formed by a river system, unless they have been purposely stocked there. The historical range of saugers was very widespread through most of the free-flowing river systems, predominantly in the eastern U.S., but navigational, power and flood-control dams along with other changes to the river ecosystems have greatly affected their historical home range. Still, they are found in good numbers in most all of the larger river systems in their home range.

There is some hybridization between walleyes and saugers, and the crossbreeding results in a fish exhibiting characteristics of both parents. The hybrid is called a saugeye, and it is quite widespread throughout the sauger range. In fact, some state fish and wildlife agencies purposely facilitate pairing of the two species in fish hatcheries and stock the hybrid in various waters to provide additional fishing opportunities for state anglers.

## Locating Good Spots

Saugers are a migratory fish, which is what makes them such a good option in wintertime. Throughout the months from spring until fall, saugers are scattered and rarely produce consistent fishing action. By moving a lot and targeting its preferred habitat, anglers can catch one here and one there and occasionally get on a small school, but largely, fishing specifically for saugers during this time of year can be frustrating for a casual angler. However, that all changes come fall.

When the water temperature starts dropping in the fall, saugers get the urge to begin moving upstream to prepare for spawning. The timing of this varies from one part of the country to another and is solely dependent upon water temperature. Thus saugers begin migrating earlier in the more northern sections of the country and later in southern waters. On most of the rivers saugers inhabit, this upstream movement is halted when the fish reach a dam. This creates a honey hole for anglers, as the fish congregate in the tail waters and provide the most consistent fishing of the entire year.

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*“Whereas walleyes utilize the entire water column, saugers prefer the depths and spend most of their lives hugging the bottom.”*

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## How To Fish

Many anglers like to fish directly below the dams and concentrate all their efforts right within sight of the dam. This produces a lot of fishing action, but Jim Duckworth believes it is unnecessary to limit fishing to just the immediate tail-water area. He says saugers do not always continue upstream all the way until they reach a dam and are found in good numbers as far as 10 miles downstream.

Duckworth is now a professional angler, fishing guide and star of numerous how-to fishing videos ([www.jimduckworth.com](http://www.jimduckworth.com)). His prior career was as a professional diver, and he spent nearly 30 years diving in many of the rivers where saugers live.

“Saugers do not go all the way to the dams to spawn,” Duckworth says. “I dived in many rivers and found sauger spawning 10 miles below the dams, and I have caught hundreds of them 10 miles below a dam with red bellies from spawning and eggs coming out of them.”

“They only go as far as they need to get to a consistent current and a clean gravel bottom,” he says. “Saugers do not make a spawning bed. They lay their eggs on clean gravel bottoms, and then the males fertilize them. So if the bottom has sediment on the gravel, when the current comes on, they just wash away with the current and are never born. Sauger eggs have a glue material on them that lets the eggs stick to clean gravel.”



PHOTO BY PAUL MOORE

**(opposite)** Guide Jim Duckworth shows off a very nice sauger. Fish of this size are good fighters and provide some fine fillets. **(above)** The most popular sauger bait is a basic hair jig, which can be used alone or tipped with a minnow or plastic trailer. Anglers should also keep a variety of other baits on hand. Pictured clockwise (from upper left): lead-head jigs with twister-tail grubs, Silver Buddy blade bait, Big Hammer swim bait (bay smelt color) and Bandit 300 Series crankbait (for trolling after the spawn concludes).



When the water temperature drops into the low 50s, saugers begin moving in good numbers, and they really begin to stack up when the water temps dip into the 40s, with their numbers continuing to increase over the following several weeks. Smaller males are the first to start arriving, and then the larger females move in as winter progresses. Fishing success usually starts to get much better around Christmas time in most of the sauger range and continues to improve into January and February. The first two months of the year are the prime time for saugers in most areas.

Saugers will tend to hang out in the eddies created around rock rip rap or other obstructions that create current breaks. When there is some water discharge, the saugers will often be found right along the break line between the fast moving water and the slack water. Additional spots to target are deep holes, the mouths of any tributaries, or irregular bottom features that give a current break.

### Low-Light Fish

The best times for sauger fishing are typically early in the morning and then again late in the afternoon. These fish are light sensitive and do not like a lot of direct sunlight, so they are most active during low-light conditions. Days with overcast skies, which are frequent at this time of year, are also very productive. The saugers really prefer the deeper holes and sections of the river, but sometimes are found shallower during select conditions. However, fishing deep is going to be the rule on most days. Don't neglect going when the weather is nasty, because the nastier the weather, generally the better the sauger bite will be.

Duckworth said finding the fish is the hardest part, but once they are found, the fishing can be fantastic. He uses a big Humminbird unit on the console and a smaller one on the bow. Both units have side- and down-scanning capabilities, which the guide said is vitally important for finding holes, finding fish and reading the type of bottom.

The guide likes to target the mouths of creeks where gravel has washed out and stacks up along the bluffs. He uses his side- and down-imaging units to find where the gravel slopes down into a hole and then back up the other side forming what he calls a ramp on each end. He said finding this gravel is the key to finding the saugers.

When the dams are generating and creating current, the sauger fishing is much better, according to Duckworth. This congregates the fish and stimulates them to feed. Duckworth said, "If there is no current, the sauger scatter out, and you will only catch one here and one there."

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*"Saugers will tend to hang out in the eddies created around rock rip rap or other obstructions that create current breaks."*

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**Saugers provide some of the best fishing action available during the winter months and are caught in wide range of sizes. The average size caught is less than 16 inches, but bigger fish are certainly available.**

### Best Baits

Saugers can be taken with a variety of artificial or live bait, or even a combination thereof. It is necessary to put the baits near the bottom for the most success. So bring plenty of extra terminal tackle, because if you are fishing in the right locations, hang-ups will be frequent.

Jigs are by far the most popular baits used for saugers, and oftentimes the weight is as much as 1- to 1½-ounce or even more, depending on the current and depth being fished. It is necessary to use enough weight to get the bait down to the bottom into the sauger strike zone. Duckworth uses jigs with either a red or pink head and white hair, but the guide said at depths greater than 30 feet, color is not as important as a contrast between the head and back of the bait.

Some folks use just a hair jig alone, while others tip the jig with live bait or some type of plastic grub or trailer. For live bait, store-bought minnows are the most commonly used, but for a better bite, use a cast net to catch minnows and 3- to 4-inch shad right out of the river and use for tipping jigs, provided this is permitted by local fishing regulations. This is the natural forage of the saugers and the bait will be much more active and natural than store minnows.

A variety of plastic baits are also used to catch saugers. Just a simple twister-tail grub is used successfully by many anglers. However, to target larger saugers specifically, other baits produce better results. Duckworth likes to use a 3-inch Bass Assassin Turbo Tail shad body bait. A 4-inch Big Hammer swim bait in green sardine or bay smelt colors is another great choice.



PHOTO COURTESY OF RYAN OSTER





Many anglers enjoy fishing for saugers in November or December, depending on water temperature. Fishing remains good in most parts of the sauger range until at least March, longer in some areas.









PHOTO COURTESY OF PAUL WILLETT

**A nice mess of saugers like this provides not only a lot of fun on a cold winter day, but they are excellent dinner fare.**

It is very important to get these baits down to the bottom and be able to keep them there. Additionally, the line used needs to be considered carefully. A lot of anglers use standard monofilament, but mono has a lot of stretch, especially when fishing as deep as 30 to 50 feet. This not only makes it more difficult to feel the bottom and bites, but it is also difficult to get a good hook set. A better choice is a 20-pound braided line, such as Spiderwire Stealth Braid. The braid has zero stretch and also has enough strength that anglers can use a steady pull on a bait hung up on the bottom and straighten the hook rather than break the line. Then the hook can simply be bent back into shape with some pliers and thus cutting down on lost baits and lost time retying.

Blade baits such as the Silver Buddy are another excellent choice for winter saugers and, at times, outproduce jigs and even live bait, especially when the saugers are hitting aggressively. In contrast, the action imparted by the Silver Buddy and similar blade baits creates a reaction bite at times when the saugers are otherwise slow to strike.

### Long Fishing Season

Sauger fishing remains good in the tail waters until March in many areas of the country and even into April in other parts. Eventually, the saugers start migrating back downstream and scattering. Even so, there are some saugers that stay in the tail waters all year long, and these fish provide one of the most consistent saugers bite during the “off season.”

Duckworth uses a trolling method he calls the “Sauger Shuffle” to catch saugers below the dams after spawning time is over. He first idles around below the dam looking for where he wants to troll by scanning the area with his big side-imaging unit. He likes to locate the main river channel and the washed-up gravel bars just below the dam. He ties on 300 Series Bandit crankbaits to four rods spooled with yellow tracer Spiderwire braid, to help visibly see the lines and keep them from becoming tangled, and places them in a Driftmaster trolling bar, thus creating a 32-foot wide trolling spread.

Duckworth explained, “The way this works is I put one man on the steering wheel, and he keeps the boat pointed right at the dam on the generator side, giving the motor just enough throttle to hold the boat in place. This only works when they are generating by the way. Then I start putting the Bandits out and, with the current, it pulls the lures out and down, and once we have all the rods out, I start giving it enough throttle to move about .5 to 1 mph. I watch for the speed the sauger like on my Hummingbird GPS reading. I then start making

## RIPPING FOR SAUGERS

> While blade baits can be fished with various techniques, “ripping” is a commonly used method for saugers. The angler simply lets the bait down to the bottom, cranks it up just off the bottom an inch or two and then “rips” the rod tip up about 10 inches or so. This causes the bait to dart rapidly upwards off the bottom, creating a lot of attention-grabbing action. Then, the angler lowers the rod and allows the bait to slowly drift back toward the bottom. The hit often occurs on the fall, but is oftentimes so light it is not felt until the next attempt to rip. Then the weight of the fish is felt and the hook can be set. —P.M.

the boat slowly go from one side of the trolling pattern to the other side. I am just barely going upstream, which is why I call it the sauger shuffle, since I am going more side to side than forward. The current keeps the baits down on the bottom chewing up the gravel. Most of the time, the area that I troll from the bottom to top is about 300 yards long, and it might take me 10 minutes to get that far. Then I reel in all the lures and drift back down to where I started and repeat.”

Saugers are a tremendous amount of fun to catch when the bite is on, and they can certainly provide an entertaining day on the water for anglers not afraid of Jack Frost.

Always keep safety in mind when fishing near the dams, wear an approved modern personal floatation device and also take into account the extra dangers involved with winter conditions. Keep an extra set of dry clothes in a waterproof bag on the boat and always provide an itinerary and fishing location to someone reliable back home. Never take a shortcut on safety for the sake of fishing.

Duckworth offers guided sauger fishing trips in his home state of Tennessee and is happy to share his fishing knowledge with anglers in other parts of the country. Simply log on to his website ([www.jimduckworth.com](http://www.jimduckworth.com)) and drop him an e-mail or give him a call. He also has available a 90-minute sauger fishing DVD, featuring country music star John Anderson. **MP**



# [ Hunting ]

*"Confidence doesn't come out of nowhere. It's a result of something...hours and days and weeks and years of constant work and dedication."* —ROGER STAUBACH

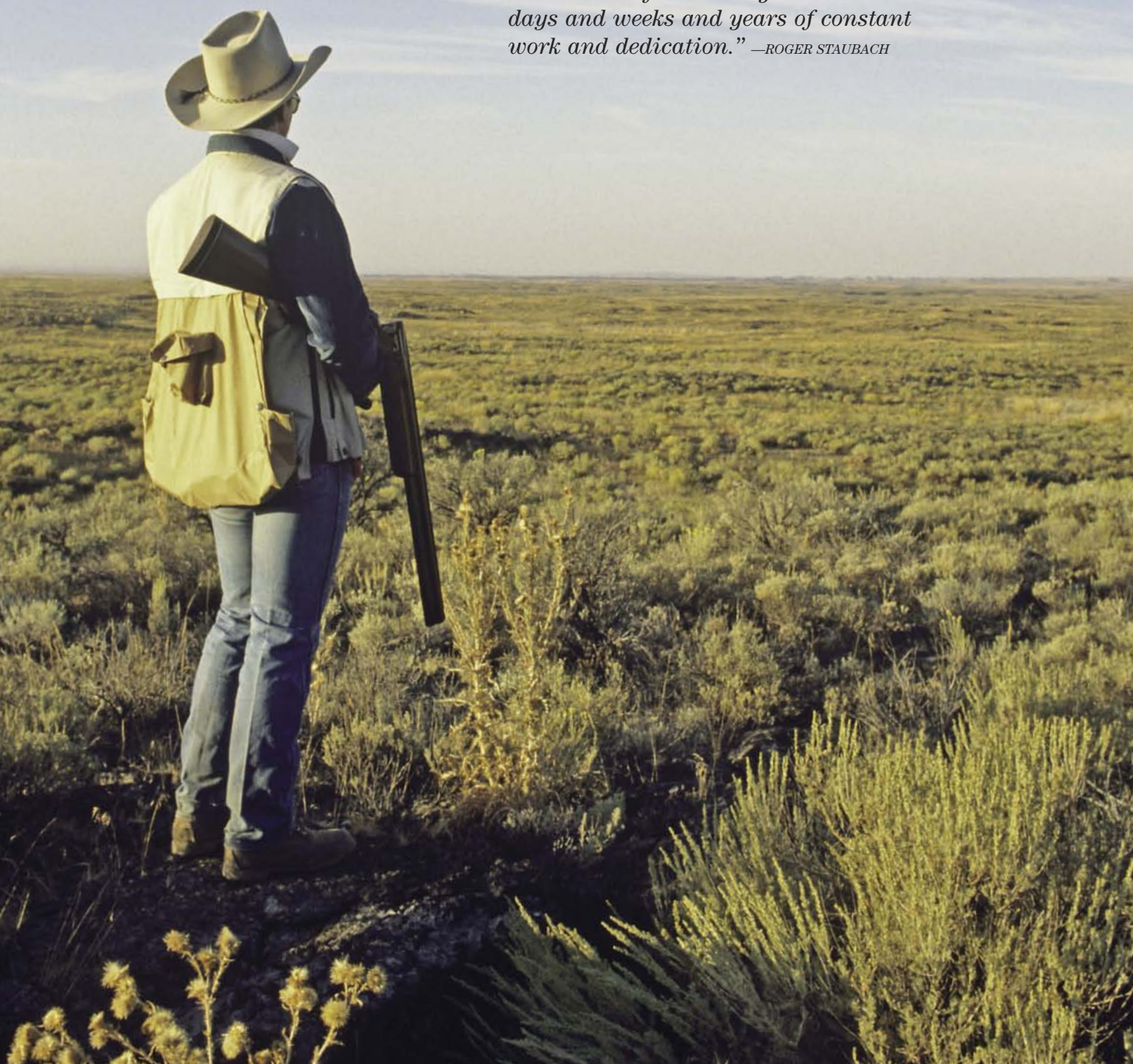


PHOTO BY THINKSTOCK



# Building a Custom Mauser

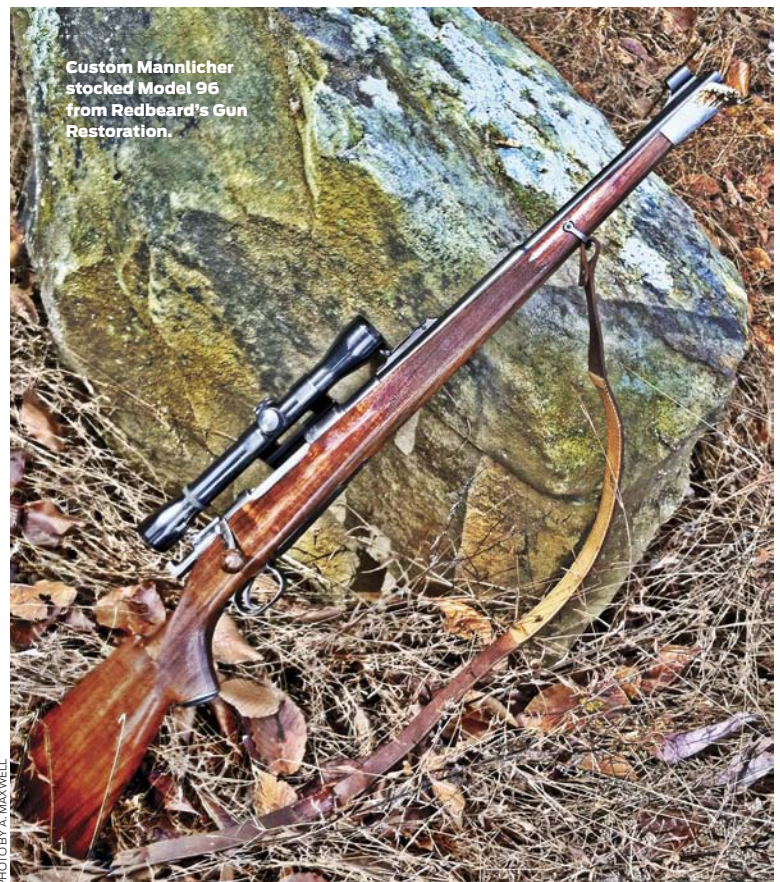
IF YOU'RE LOOKING TO CRAFT OR RESTORE A UNIQUELY FUNCTIONAL AND DEAD-ACCURATE HUNTING RIFLE, THIS IS IT.  
By Michael Pendley

**T**he buck slowly eased his way into the food plot. As he turned broadside, the hunter eased the rifle out the window of the blind. Finding the buck's shoulder in the scope's crosshair, the hunter squeezed the trigger, sending the 6.5mm bullet into the deer and anchoring him in place.

The hunter was my 14-year-old son and the rifle he used was a sporterized Model 96 Swedish Mauser, restored and customized for us by Andrew Maxwell at Redbeard's Gun Restoration. What had started life as an instrument of war was now a sleek and beautiful hunting tool.

## Simple Design

What makes the Mauser rifle the most customized and copied rifle in the world? When Peter Paul Mauser and his brother Wilhelm came up with their initial bolt-action design in the late 1850s, the rifle revolutionized military weapons of the day. The bolt design, gas handling ability, simplicity and strong lock up made it one of the most copied firearms in history. The U.S. Springfield Model 1903, as well as American sporting rifles like the Remington 700, Ruger 77 and Winchester Model 70 all borrow many of the features from the original Mauser rifles. Couple these outstanding features with the ready availability of surplus actions and barrels and it is easy to



Custom Mannlicher stocked Model 96 from Redbeard's Gun Restoration.

PHOTO BY A. MAXWELL





Many custom Mausers have very ornate details, like the carved hunting scene on this stock. (below) Notice the jeweled bolt and walnut bolt-knob on the Redbeard's custom piece.




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*“Maxwell recommends searching flea markets, used gun shops and online auction sites for project guns.”*

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see why the Mauser is the main choice when it comes to customization and sporterization of a military firearm.

When asked what to look for when picking a Mauser for customization, Maxwell states that his top choice is the Model 98 Large Ring model. These rifles were the last production models for the original military Mausers. Mostly German, Argentine and Czechoslovakian produced, these rifles were manufactured in 8x57 (8mm Mauser), 30-06 (in the case of the South American rifles), and 7x57 (7mm Mauser). All three rounds have been proven time and time again on all sorts of large game, and factory loaded ammunition is readily available just about everywhere. Since these rifles were the final production run, they boast the most improvements in safety and performance.

A close second for Maxwell, and my choice because of the round they are chambered for, is the Model 96 Small Ring Swedish Mauser. As the name implies, these rifles were manufactured in Sweden and feature meticulously hand-fitted parts and superb metallurgy. Chambered in the perfect whitetail round of 6.5x55, they make an excellent sporting rifle for medium-sized game. Although the 96 lacks the third locking lug and beefier shroud of the 98, the finer level of fitting and higher metal quality more than make up for these shortcomings.

Finally, on the list comes the Model 93 and 95 Spanish Mausers. These rifles lack some of the refinement of the 96 and 98, but still make serviceable firearms. Spanish Mausers often get a bad rap for being unsafe. This is due to the fact that many of them were converted from their original 7x57 (7mm Mauser) into the much stouter 7.62x51Nato (.308 Winchester). If you choose a 93 or 95 to customize, stick with the 7mm Mauser models.

### **Where to Search**

Maxwell recommends searching flea markets, used gun shops and online auction sites for project guns. “Thousands and thousands of





The sky is the limit when it comes to custom modifications on a rifle—note the antler-tipped forearm feature on this gun.





**(above)** This is a polished Mauser barrel and action ready to be rust-blued.

**(left)** A custom cartridge trap inlet into the stock is another option that sets a custom gun apart.



these guns were imported to the United States as low cost hunting rifles from the 1920s through the 1950s. Returning GIs were familiar with these rifles and liked the idea of a low-cost hunting rifle. Many of these guns had some of the basic sporterizing steps done to them to make them more serviceable as hunting rifles. These make the best candidates for a custom rifle, as their military collector value has already been reduced by the work done to them. Look for clean barrels, no or very little pitting and tight actions," Maxwell says.

### What to Change Out

The most transformative step in converting a military Mauser is a restock. Drop in or near drop-in stocks are available from many stock manufacturers like Boyd's Gunstocks ([www.boydsgunstocks.com](http://www.boydsgunstocks.com)) in a multitude of woods, styles, grades, trim and finish levels. From fully finished and ready to accept an action, to rough semi-inletted stocks that require hand finishing, inletting and engraving, the rifle builder can choose the amount of work he or she is comfortable with.

PHOTOS BY A. MAXWELL



Next on the list for most surplus rifles is a complete rebluing of all metal parts. Although many first timers go with cold bluing because it is easy and faster, Redbeard's recommends rust bluing for the rifles they restore. "Cold bluing is more like a coating on top of the metal that discolors over time and wears through easily, whereas rust and caustic bluing actually etches the metal and provides a layer of protection between metal and the elements," says Maxwell. Rust-bluing requires a heat source, a tank, and inexpensive rust-bluing chemicals. Tanks can be easily made from a section of aluminum guttering sealed with high-temperature sealant. There are many videos available online that demonstrate the rust-bluing process. In its basic form, it begins with a high polish of all metal parts with 320-grit sandpaper. After the parts are polished, a thorough degreasing is needed. Any grease or oil left on the metal will alter the finished color.

Once all of the parts are polished and cleaned, install plugs into both ends of the barrel to prevent water and bluing chemical from entering. Apply a very thin coat of bluing chemical. Avoid runs, as they will show up in the finish later. Hang the parts in a clean, draft-free, damp box for one hour to rust. A serviceable damp box can be fashioned from a cabinet with a pan of water and a light bulb for additional heat. After one hour, remove the parts from the damp box, apply another thin layer of rust-bluing and back into the damp box for another hour.

### Clean It Up

Next, remove the parts from the damp box and immerse in a tank of boiling distilled water for 20 minutes. Remove the parts from the water and dry. A thin layer of black velvet rust should cover the metal at this point. Remove this velvet texture with either 0000 steel wool or a soft carding wheel on a drill or drill press. The metal should be slightly darker than it was in its polished state.

The entire process is repeated until the desired color is achieved. Normally this takes at least five, and as many as 10, layers. Once the parts have reached the correct color, a final polishing and then a light coat of boiled linseed or quality gun oil is rubbed over all surfaces to seal the finish.

### Barrel Quality

Many Mausers, particularly the Swedes, still have barrels of exceptional quality. These barrels are more than sufficient for sporting needs. Should your barrel be pitted, or in a



PHOTO BY AUTHOR

The author's son, Hunter, with the first deer taken with the author's custom Model 96 in 6.5 x 55 Swedish.

different caliber than you desire, new barrels are available for all Mauser models. For maximum accuracy, take the time to true the receiver and tap the threads to accept the new barrel tightly. Mausers can also benefit from glass bedding of the action and free-floating the barrel to improve accuracy.

### Small Touches

Other steps for conversion into a fully functional and beautiful sporting rifle include bending or forging the bolt handle from the straight military style into the bent American sporting style, adding hinged floor plates, jewelizing the bolt, drilling and tapping for scope mounts, cutting down and recrowning the barrel into a more manageable hunting length and installing improved triggers and safeties. Maxwell cautions to go slow when taking away wood and metal; they can't be added back. He also recommends avoiding power tools like Dremels and the like. "Going slowly by hand reduces the chances of a serious error that can't be repaired."

The sky is the limit on the level of customization for these guns. White grip spacers, custom stocks shaped to fit the owner, butt plates, trigger guards, the great thing about customizing your own rifle is that you choose what the finished product looks like. Don't be afraid to mix and match parts. One of the neatest rifles that Redbeard's has done is a model 96 Swede that includes a Mannlicher stock, a Browning grip cap, a Beretta walnut buttplate, a Blaser walnut bolt knob, a Ruger forward barrel band, a Remington 700 rear sight and an antler burr from a shed found on the farm. Put together they look great. **MP**

## SHOPPING FOR PARTS

> Parts for Mauser rebuilds are readily available online from gunsmithing sources like MidwayUSA (MidWayUsa.com), Brownells (Brownells.com), and Numrich Gun Parts (GunPartsCorp.com). Make sure to know the model of your Mauser when ordering parts, as many are model specific.

—M.P.



Hunting shed antlers is not only fun, it can reveal a lot about the buck population in a particular area.





# What to Do When Deer Season Ends

LATE-WINTER AND SPRING ARE THE PERFECT TIMES TO HIT THE WOODS, SEARCHING FOR AMBUSH CLUES AND PICKING UP SOME PRIZED SHEDS.

By Paul E. Moore

**I**n some ways, the conclusion of deer season is bittersweet. The bitter part is knowing it's over and that it will be a long time until it resumes. We also think about the disappointments and missed or botched opportunities. On the positive side, we reflect on the season's enjoyment and successes, and are thankful for having had another season in the stand. But now it is over. Or is it?

Sure, the actual hunting part is over, but for hardcore deer hunters, it is the time to transition into another part of the year-round dedication to deer-hunting. The postseason is no time to slouch; there is much to do. Obviously, tree stands and other equipment needs to be cleaned, repaired and stored, but there is plenty of fun and highly productive tasks. Now is the perfect time of year for two very important deer-hunting activities: postseason scouting and searching for shed antlers.

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*“Ridges, fence rows, saddles, ditches and other contour all come more into view during this time of year.”*

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## Post-Season Scouting

By far, one of the best times to scout for deer is after deer season concludes. Hunters do not have to be as concerned about bumping deer away from a stand site or putting the entire woods on high alert. Unlike scouting prior to or during the season, hunters can spend quality time in the woods with boots on the ground. One day of walking, looking and studying during the post-season can teach more about the hunting woods than years of sitting in the stand and guessing.

The barren woods reveal much that cannot be seen during summer and fall, when the greenery is at its peak. When everything is green, many places look thick, and it is hard to determine exact bedding and refuge areas. After all the leaves are gone, it is much easier to find core areas and thick bedding areas. It's a given that if it is thick and secluded during mid-winter, it definitely will be thick after green-up in the spring.

Ridges, fence rows, saddles, ditches and other contour all come more into view during this time of year. Time spent studying these features and relating them to how deer are seen moving throughout the season is



Putting a trophy on the wall like this one might happen by sheer luck, but finding sign or sheds during the post-season can help increase the chance of success.



PHOTO COURTESY OF GABE JENKINS

saw, which direction they came from, where they went and the conditions and wind direction during those sightings. Obviously, keeping a hunting journal during the season helps facilitate this type of scouting. I try to think about everything that went right and everything that went wrong at this stand site, and then I want to determine why.

Where were the deer coming from, and where were they going? How did wind direction play a part? What time of year did they move? What time of day? These are just some of the questions to be answered. Then I look through the foliage-free woods and try to determine how the topography and habitat played a part. Lastly, I want to determine if this stand site is adequate as it is or if it needs to be moved. Is there anything I can do to enhance or manipulate the area around the stand to make the site better?

### The Antler Miracle

The antler process is pretty astounding. Underneath the velvety outer layer, a mass of blood vessels and tissue begins to grow in the spring and continues until early fall. The antlers grow at an astounding rate and are one of the fastest-growing tissues in the animal world. The antlers begin to harden in the fall when the amount of daylight decreases and the bucks have a subsequent rise in testosterone. Soon, the bucks shed the velvet revealing the magnificent hardened antlers adored by whitetail hunters.

The headgear serves not only as an eye-catcher for hunters, but as a visual sign to other bucks as a display of genetics, maturity and dominance. For bucks that want to test

definitely time well spent. Subtle contour features may explain certain movement patterns that remained a mystery throughout the season. One can learn much by studying the hunting areas and the lay of the land.

Some folks only have one or two stand sites; others have numerous locations. Some people sit the same stand the entire season, while others move stands all season long. It really depends on how the person likes to hunt, how much effort he or she is willing to invest and how large the property being hunted. A 300-acre farm obviously provides options for more stand sites than does a 20-acre parcel. Regardless of the number of stand sites on the property, the post-season is the time to visit every one of them.


I like to go to each stand site and spend some time there analyzing what took place during the season. I think about the deer I



Sheds must be found quickly before rodents or other animals have the opportunity to feast on them. Notice the tips are gone on the shed on the left, and the one on the right has gnawing on the main beam.

PHOTO BY PAUL MOORE





Finding rubs and scrapes in the post-season often tells about bucks that made it through the season. Finding a line of rubs or scrapes gives clues as to travel patterns.

another's claim to dominance, antlers also serve as the means by which they prove it. Even so, if you've spent much time in the deer woods during pre-rut, you know that sometimes the buck with the biggest rack doesn't win the fight.

As winter passes and the days start getting longer, the increased amount of sunlight leads to a decrease in testosterone levels in the bucks. Osteoclast cells then begin doing their job of reabsorbing bone at the base of the antlers. An abscission layer develops on the antler pedicel, and the antler then simply drops off. After a period of time, the whole antler growing process begins anew.

### When They Shed

The timing of when antlers drop can vary in regions of the country and even from buck to buck or from year to year. Factors such as stress or lack of nutrition can cause early

*"I like to go to each stand site and spend some time there analyzing what took place during the season."*

shedding. Other times, a buck may keep its headgear on into early spring. In my area, bucks sometimes start shedding as early as December, and most will have shed their antlers by early February. Some will keep their antlers until later in the month and sometimes on into early March, but the instances taper rapidly after the first week or two of February. In other parts of the country, shedding may be on a different timetable and, as mentioned, various factors impact the exact timing of shedding in any given year.

It is never too early to start looking for sheds, but it is possible to push a few bucks out of the area before they actually drop their racks. It is best to wait until the majority of bucks have shed before disturbing the area, but don't wait too late about venturing forth or the antlers will be severely damaged by the weather and rodents gnawing them for their nutrients.



## Why Search for Sheds?

What good does it do to find a shed? The answer may be different for each person. Some people only search for sheds to collect and as a hobby. Others may use them for creative purposes. For the hunter, finding a shed can reveal a lot that may be beneficial for the following season.

First, it gives an idea of which deer survived the past season and are hanging around in the area. It may even reveal a buck whose presence was not previously known. It also is

**(below)** The cold months mean less vegetation overhead, allowing you to identify key travel routes along the topography a lot easier compared to the warmer months.

**(opposite)** Sometimes shed-hunting trips are much like real hunting trips—they end with an empty bag. Other days may result in multiple finds.



a credible indication of what can be expected for the following season. Unless the buck is very old and starting to decline or has some genetic problem, it should boast an even larger rack next fall after another year of age and growth.

## Shed Hunting

Searching for shed antlers is one of the favorite outdoor pursuits at this time of year for hunters. Not only does it give folks an excuse to get in the woods, but it is a lot of fun and very rewarding. The time spent in the woods looking for sheds can be put to great use and benefit future hunting endeavors tremendously.

Let the newcomer be forewarned, though: There is a lot more searching than there is finding. One should not become overly optimistic about finding bunches of sheds. Sure, sometimes people go out to prime areas and find a good number of sheds in a single outing. Nonetheless, realistic thought must prevail. There are often several trips made into the woods without locating even one shed, much less multiples. Looking for sheds is enjoyable, but there is much more to it than just taking a stroll through the woods and finding a pickup-load of antlers.

The good shed hunter has many attributes, such as being patient, persistent, sharp-eyed and knowledgeable. Knowing where to look is a big part of your success. After that, it takes diligence and just plain ole sheer dumb luck.

## Where to Search

Knowing where the bucks have been spending their time will cut down on a lot of fruitless looking. Bucks will generally not be socializing with does much after the rut has long since passed. They will remain close to secure bedding areas and only venture out for feeding. These are the areas searchers should target.

Some sheds just seem to have been dropped at a random spot. Most though, will be found in or close to thick bedding areas. Others will be found along trails leading to or from feeding areas or even within the feeding areas themselves. Check for hard crossings such as where a deer must jump a fence or a ditch; the impact of landing sometimes dislodges a loose antler. But don't become close-minded on where to look. Sheds are where you find them and not always where you expect.

The oddest place I ever found a shed was while I was on a lake in the spring. As the boat slowly trolled across a shallow cove, I spotted something odd in the water up ahead. Reaching over the side of the boat, I lifted a very nice shed antler from the bottom of the lake in about two feet of water. Most likely,



the buck dropped this antler as he was crossing the embayment in early winter while the lake was pulled down to winter pool.

Regardless of where a shed is found, a very close inspection of the surrounding area may yield its mate. Sometimes bucks drop both of their antlers within moments of each other. Other times, they may drop days apart. If several bucks are sharing a core area, many sheds might be located in close proximity.

### Shed Traps

In areas where it is legal to bait or use supplemental feeding, some folks use various shed traps to facilitate the shed-hunting process. Although not something I do personally, there is no denying shed traps sometimes produce sheds that otherwise would not have been found. Shed traps do, however, pose some negatives, and some designs are dangerous to the deer.

The most dangerous sheds are the ones utilizing wire. The basic concept behind a shed trap is to place corn or another food source near an object so the buck will be forced to come into contact with the object in order to reach the food. Some hunters construct traps made of wire fencing designed so that when the buck bends over to reach the food, its antlers will entangle with the wire and be pulled free while the buck is eating. The downside to this is obvious: If a buck becomes entangled with the wire and his antlers are not yet loosened and ready to shed, he may become trapped, injured or even killed. Plus, if the antlers are not yet ready to shed and they are torn from the buck's head, damage to the pedicel may result.

A safer shed trap method is to place feed in a 5-gallon plastic bucket and secure the bucket to a post or tree. When the buck sticks his head into the bucket, he will sometimes dislodge loose antlers. But getting a buck to stick his head into a bucket is not always a given. An even safer method is the post method, where two heavy posts are placed in the ground close together, but not close enough so a deer could get its head stuck. Feed is placed between the posts with the idea that the buck will bump the posts while moving his head around eating and thus dislodge the antlers.

### Shed Dogs

Hunting deer sheds with dogs is not a new concept, but it is one that has become more popular in recent years. More and more people are keeping and training dogs to help locate shed antlers. This method is a lot less work for the hunter, increases the rate of finds and is very enjoyable, especially for peo-



PHOTO BY JOSH HONEYCUTT

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*“More and more people are keeping and training dogs to help locate shed antlers.”*

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ple who use dogs for other types of hunting or simply enjoy dogs in general.

Various breeds of dogs are being taught to hunt sheds, and some are more naturally gifted at it than others [[which breeds are the best? Would be helpful info/ms]]. Regardless of breed, training takes a lot of time, but that's part of the fun. Training a dog to hunt sheds, then have it mature and become proficient at the process is very rewarding.

Dogs are usually trained to utilize one of two basic methods of shed hunting. Some dogs are taught to locate the shed and then sit and alert the owner to the find, much like a bird dog points but does not flush until commanded. The other method is the dog locates and then retrieves the shed to its owner. The method taught is a matter of personal preference, but the former allows the owner to go to the actual spot of the find and have the opportunity to do some on-the-spot scouting.

### Hit the Woods

It is very easy to while away these days in the warmth of the house watching TV and resting from a long deer season. But there are plenty of other things you can do outside, including fishing or some late-season hunting. Even so, making time to hit the deer woods for some post-season scouting and shed hunting can be very beneficial and perhaps even lay the ground work for tagging that wall-hanger next season. Take a kid or even the family along while shed hunting and make it a fun day in the woods. **MP**





· TECHNICAL ·

# Gauges & Game

PHOTO BY THINKSTOCK

WHEN IT COMES TO SHOTGUN SIZES AND GAME, THERE'S NOT A ONE-DOES-ALL-BEST GAUGE. HERE'S HOW THEY MEASURE UP.

**By Thomas C. Tabor**

**I**'m quite fond of the smaller-gauge shotguns. Through the decades, I've hunted with a variety of both 20- and 28-gauges for quail and various types of partridge, grouse and doves, and have had a lot of fun doing so. In those cases, a small-gauge shotgun can be a very viable alternative to the larger guns.

I also adore the little .410 but consider it to be a specialized weapon that is best suited for use on clay targets rather than for hunting. I have used a 16-gauge to a certain degree and find it thoroughly acceptable for upland bird hunting, but it does come with some baggage that I'll discuss a little later on.

And on the far end of the spectrum is the big 10, which, like the .410, I believe to be a specialized weapon with very limited hunting potential. And last in this impressive array of choices is the most popular of all gauges: the 12, which may be the most diverse when it comes to its hunting capabilities but may still not be the best choice for your particular hunting situation.



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*“With each gauge,  
there are both positive  
and negative points  
that a wise procurer  
should carefully weigh.”*

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For the hunter looking to make the best possible decision on which shotgun gauge would be best for their particular application, it's important to recognize that none are absolutely perfect in every way. With each gauge, there are both positive and negative points that a wise procurer should carefully weigh. So, let's now dive in a little deeper into each of these shotgun choices to see how they stack up.

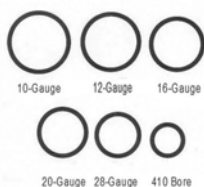
### The Pipsqueak Little .410

Unbeknownst to many shooters, the little .410 isn't really a “gauge” at all. To be accurate in its terminology, it should be called a “410 bore.” The difference is that, in this case, the name reflects the actual bore diameter in inches (0.410-inch) while all of the other shotgun gauges are measured in a dramatically different manner. As ironic as it might sound, the numbers corresponding to the other gauges are based on how many round lead balls of that particular bore diameter would be needed to make one pound. In other words, it takes 12 lead balls equal to the 0.725-inch diameter of a 12-gauge bore to weigh a pound. Likewise, it takes 20 lead balls measuring 0.615-inch, which is the diameter of the 20-gauge bore to equal one pound.

Initially, the length of the .410 shotshells was only two inches, but today both 2½- and 3-inch shells are considered the norm. These



The choice in shotgun gauges is a fairly large one (L-R): 10-gauge; 2½-inch, 12-gauge; 16-gauge; 2½-inch, 20-gauge; 28-gauge and the 2½-inch, 410 bore.



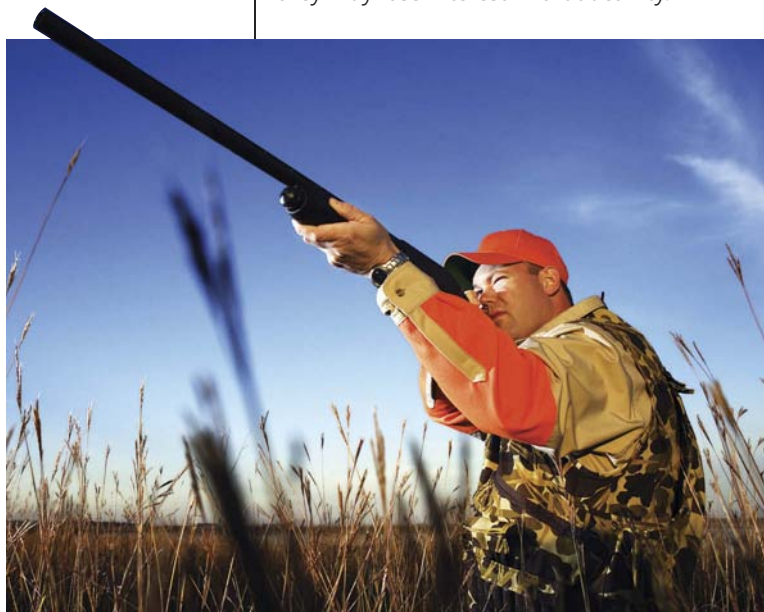
(below, left) The 12-gauge shotgun is the first choice for many bird hunters, especially those pursuing pheasant.

(below, right) Virtually every company that loads for shotguns will have a selection of 12-gauge shells to choose from. This factor in itself makes considering the 12-gauge very worthwhile.

typically contain shot charges, ranging from about ½-ounce in the 2½-inch shells up to about ¾-ounce in the 3-inch version.

As I mentioned earlier, I really do love shooting the little .410 for clay targets, but in my opinion, this bore should never be seriously considered as a viable option for bird hunting. Unfortunately, some people think it's a good choice to start a young hunter out on, but I think it is akin to sending a child ocean fishing in an 8-foot skiff. I suppose, in both of these cases, you could do that, but disaster will likely be the result.

A much better option for the youngster would be to start him off shooting a 20-gauge. In this case, very light loads could be shot, and then as the child grows in size and stamina, the potency of the loads could be increased. Shooting a .410 would only limit the child's ability to be successful—and it is extremely important for youngsters to experience success early on in whatever they are doing or they may lose interest in that activity.







### The 28-Gauge (My Favorite)

When it comes to hunting such species as doves, grouse, quail and partridge, I advise using the 28-gauge. In these situations, the typical light weight and quick handling of the 28 makes it ideal. I would draw the line, however, when it comes to using a shotgun in 28-gauge for pheasants. Even though some 28-lovers will disagree with me, I don't believe it's well suited to tackle the tenacity of these typically hard-to-kill birds. Trying to do so simply wouldn't be fair to the birds and would likely result in far too many being wounded and escaping.

Most hunters prefer shot sizes no smaller than #6s for use on pheasants, and many hunters even use shot as large as #4s. That being the case, there simply isn't very many pieces of shot contained in the typical ¾-ounce shot charge of the 28. On the other hand, for the smaller game mentioned earlier shot sizes of #7½s and even #8s can produce devastating results because of the denser shot patterns produced by the smaller size shot.

### The Popular 20-Gauge

I also have a lot of fond memories hunting with my 20-gauge shotguns. On numerous occasions, while hunting chukars, the performance of my little 20s raised eyebrows of my fellow hunters who were packing 12s. In some cases, I pulled off shots that even astounded me, dropping several of the little gray speed demons before they could disappear out of sight in an adjacent canyon. Obviously, the 20 falls short in the category of the firepower when

**(above)** Turkeys are tough birds to bag and, to be consistently successful, the hunter must be able to deliver a substantial charge of shot to the bird's head. In this case, there is no better choice than a 12-gauge choked exceptionally tight.

**(below)** The author favors the 20- and 28-gauge for upland game hunting, since these guns are a pleasure to shoot and weigh less overall for easier carrying afield.



**(above)** Because of the size and tenacity of turkeys, most hunters choose to use a heavily loaded 12-gauge that is choked to provide the densest possible shot pattern.

compared to its much larger cousin, the 12, but when hunting this size of game I personally feel it is perfectly matched. Like the 28, the 20 is favored for its speed and quickness in its handling abilities, and that provides an edge over the larger gauges.

The 20-gauge captured a great deal of attention around the early 1960s, when the 3-inch version first appeared on the scene.

PHOTOS BY THINKSTOCK







*“I love shooting the little .410 for clay targets, but this bore should never be considered as a viable option for bird hunting.”*

At that time, the 3-inch was frequently touted as being the equivalent in performance to the 2 $\frac{3}{4}$ -inch 12-gauge, but if you look carefully at the performance data of these two shotgun gauges, you will find those claims to be unsupported. The 12-gauge has about a quarter of an ounce greater shot capacity and a considerably greater potential for increased velocities over that of the 3-inch 20. And when a comparison is made between the 3-inch and the 2 $\frac{3}{4}$ -inch 20-gauge, we find that the differences in performance to be only marginally better in the 3-inch. That slight difference will cost you dearly when it comes to ammunition prices. The good news comes into play by the fact that a 3-inch chambered 20-gauge shotgun can also be used to fire the 2 $\frac{3}{4}$ -inch shells. In my own case, I have owned an over-and-under 3-inch 20-gauge for many years, and I can't think of a single time that I have shot a 3-inch shell in it. I am perfectly happy with the astounding performance I receive with the 2 $\frac{3}{4}$ -inch shells when they have properly loaded.

### The Quickly-Becoming-Obsolete 16-Gauge

I must admit my own personal experience is a little light when it comes to the 16-gauge. Many years ago, when the movement requiring steel shot for use on waterfowl was in its infancy, there was a short period of time when you could still use lead shot on the National Wildlife Refuges if you were shooting any other gauge than a 12-gauge. That inspired me to purchase a Browning “Sweet”

(above) Obviously one of the major advantages of shooting a larger gauge shotgun is the increase in shot charge. Shown here for comparison purposes are some of the major players and the corresponding normal lead shot charge loads (L-R): 10-gauge 3-inch with 2 $\frac{1}{2}$  oz., 12-gauge 3 $\frac{1}{2}$ -inch with 1 $\frac{1}{4}$  oz., 12-gauge 3-inch with 1-5/8 oz., 12-gauge 2 $\frac{3}{4}$ -inch with 1 $\frac{1}{4}$  oz., 16-gauge with 1 $\frac{1}{4}$  oz., 20-gauge 2 $\frac{3}{4}$ -inch with 1 oz., 28-gauge with  $\frac{3}{4}$  oz. and the 410 bore with  $\frac{1}{2}$  oz.

(right) Predator hunting has become quite popular recently and a shotgun can be an effective tool when used at moderate to close range as long as you shoot shells which are intended for that purpose like these Federal Premium Coyote Heavyweight rounds.

(below) The longer versions of the 12-gauge has the ability to substantially increase the performance and shooting range, which makes them particularly popular with waterfowl hunting where non-toxic shot is required (L-R): 3 $\frac{1}{2}$ -inch Magnum versus the 3-inch Magnum.



16" A5 semi-automatic. Unfortunately, they changed the ruling shortly afterward, and that particular 16 never saw a single duck fall to its charms. I do have several bird-hunting friends who absolutely adore their 16s. The obvious advantage over it and its closest competitor, the 12-gauge, is the size of the shotguns.

Unfortunately, however, some manufacturers essentially opted to slap a 16-gauge barrel on the same frame they were using for their 12-gauges. That being the case, there would be no advantage in using the 16. So, if you are considering the purchase of a 16-gauge, I would strongly recommend that you select a model that has been appropriately sized to its smaller bore.

The typical lead shot charge in the 16-gauge is 1 $\frac{1}{2}$  ounce, but frequently you will find loads with lighter shot charges, and occasionally I have seen some big 1 $\frac{1}{4}$ ouncers. Mostly, though, as the shot charge increases, the velocities decrease to compensate for the potential of higher pressures, so it is a trade-off when it comes to the benefits and sacrifices of more shot.

Possibly the biggest obstacle in the 16's popularity is the scarcity of the ammunition. Because it is one of the least popular shotgun gauges, the ammunition can frequently be difficult to find, and if you do locate a few boxes, your choices of loads and shot sizes will likely be extremely limited.

### The Venerable 12

The 12-gauge is to bird hunters what the SUV is to family transportation, and as such it





(above) Tom's little SKB 28-gauge over and under did a fine job when hunting Hungarian partridge. (above, right) Tom took this nice little Hungarian partridge using his SKB 28-gauge over and under. (below) Tom's own stash of 12-gauges helps to demonstrate how much respect that he has for this gauge (L-R): Browning Superposed, Browning A5 semi-auto, Ithaca side by side, custom Winchester Model 12 pump, Ithaca Model 37 pump and a Remington Model 870 pump.




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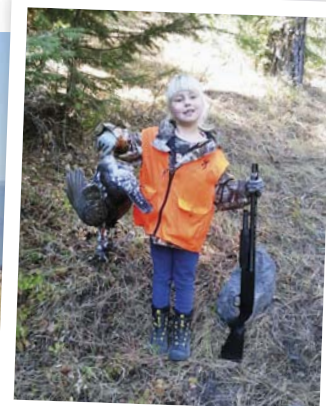
*“When I head out bird hunting for pheasants, I generally take along one of my 12-gauges. There is absolutely no better choice when it comes to turkeys, ducks and geese.”*

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is the most popular shotgun gauge of all time. That favorability is largely supported by its potential diversity of use. While the 12 frequently isn't my first choice when it comes to the smaller fowl species, it's perfectly fine to use it for virtually any critter possessing feathers and, when loaded properly, even in some cases for deer and various other types of hairy game.

When I head out bird hunting for pheasants, I generally take along one of my 12-gauges. There is absolutely no better choice when it comes to turkeys, ducks and geese. When the government proclaimed a moratorium on lead for waterfowl hunting it only increased the popularity of the 12-gauge and eventually that led to the creation of the 3½-inch 12-gauge. Clearly the nontoxic varieties of shot pale in killing potential when compared to lead shot. In this case, if I had to draw a comparison of the performance of steel versus lead shot, I would say a heavily loaded lead 2¾-inch shell would provide about the same level of killing potential as a 3½-inch shell loaded with steel. But if you have to resort to using those longer shells, you will be paying a premium for that pleasure, both in





(above) Tom's granddaughter Danielle proudly displays her first blue grouse taken with her youth version 20-gauge.

(left) When it comes to goose hunting, there is no better choice than a 12-gauge. Then the only decision that has to be reached is which chamber length would be best to use: 2 $\frac{1}{4}$ -, 3 or a 3 $\frac{1}{2}$ -inch.

(below) How a shotgun fits and swings will also make a substantial difference in how well it performs in the field. A good shotgun points like an extension of your arm.

price and recoil. But, like the 20-gauge, you would still be able to shoot the shorter shells in that 3 $\frac{1}{2}$ -inch chamber.

### The Beefy 10-Gauge

I kind of relate the 10-gauge as a throwback to the era of the market hunters, when a heavy emphasis was placed on putting as much shot into the air as possible in the hope of quickly filling the boat with quackers. In today's world, however, I look at the 10 as being an example of too much of a good thing and, as such, I can't really envision any other place other than the goose pit where its use would be justifiable. And even then, if you are looking for that much more potential, the 3 $\frac{1}{2}$ -inch 12-gauge could be a better and more versatile option. Nevertheless, if you insist that a 10-gauge should be in your arsenal, you must recognize its limitations. The shotgun will likely be considerably heavier; it will likely probably kick like a blind mule; the shells will be notably more expensive and harder to find, and if you are lucky enough to find shells, the choices available to you will be minimal.

### The Bottom Line

So, which shotgun gauge is best for you personally? Only you can answer that question. For me, however, I thoroughly enjoy owning a variety of different shotguns and gauges, and that allows me to select whichever one best fits my particular shooting needs on that occasion. Some hunters though are looking for a single shotgun to serve all their hunting aspi-

rations. In this case, the 12-gauge is probably the best answer. It clearly provides the most diversity of potential use which is capable of being effective for waterfowl yet it could double as a gun for upland birds or turkey hunting, or for taking an occasional dove. For the larger species, it would nice if the shotgun had at least a 3-inch chamber, but for the other applications, a 2 $\frac{1}{4}$ -inch would perform perfectly well and the cost of the ammo will be much more affordable. If you have no desire to hunt the larger species of birds, I would encourage you to look closely at the advantages inherent in a little 20- or 28-gauge. **MP**

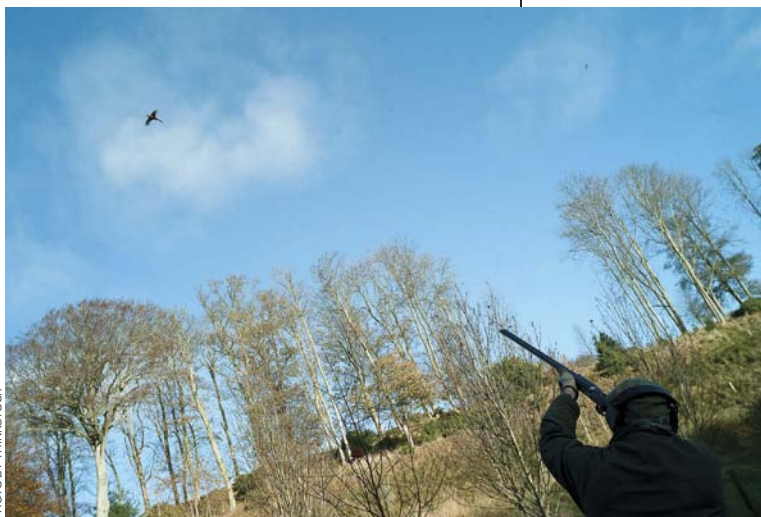


PHOTO BY THINKSTOCK







# DIY Turkey Mount

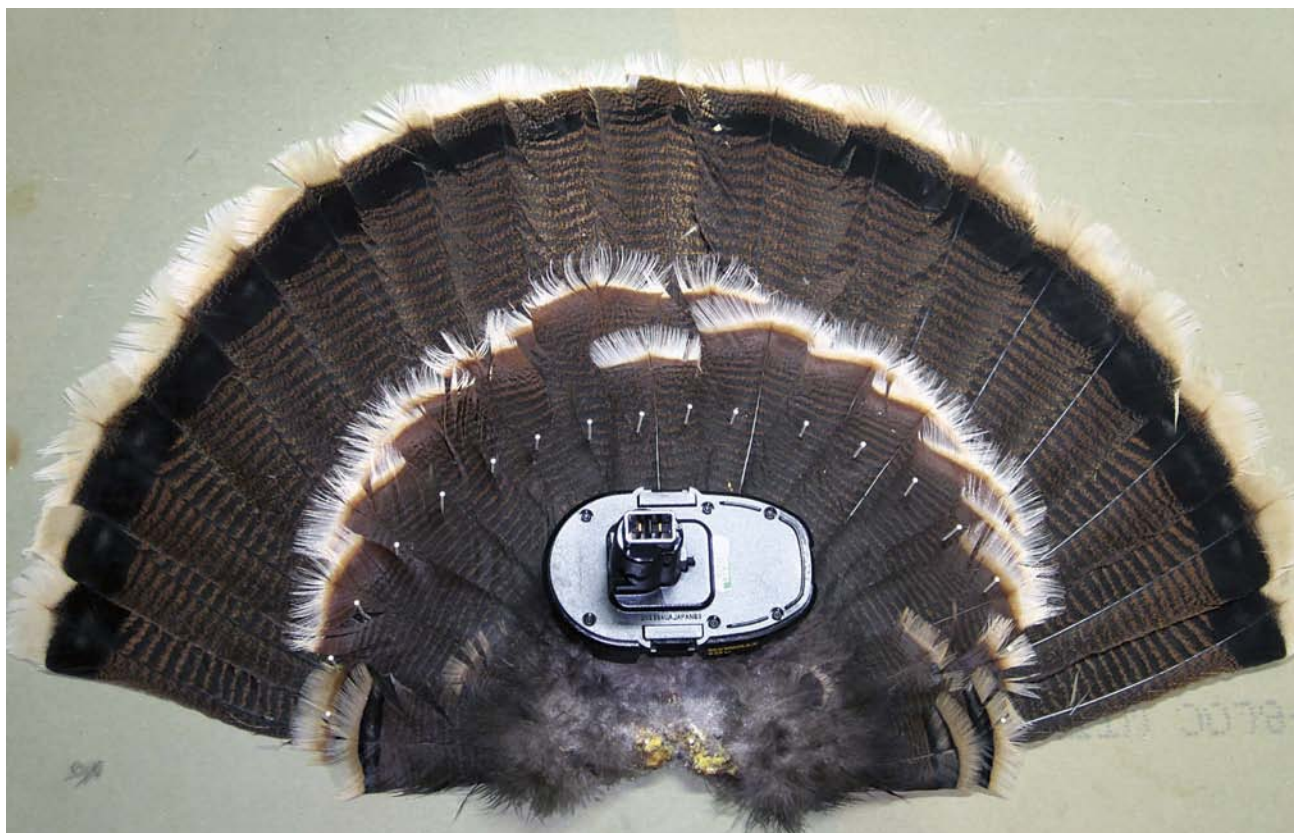
FOLLOW THESE FIVE SIMPLE STEPS FOR THE ULTIMATE DO-IT-YOURSELF TURKEY-FAN DISPLAY. *By Brian Brown*

**T**urkey season had opened a couple of days earlier, but it was still early and the birds had yet to get fired up. We had spent the afternoon cruising ridge lines glassing and calling, but the gusty winds made it hard to hear anything and limited any activity to the bottoms and draws, which were out of the wind. I was ready to throw in the towel for the afternoon, but my hunting buddy suggested we try couple calls into one last draw. Reluctantly, I agreed, and we dropped off the ridge out of the wind so we could hear better.



PHOTOS BY THE AUTHOR





(above) Use the finishing nails to position the fan appropriately. A small battery pack is used to keep the fan in position as it dries. (left) These are the display materials the author chose for his mount. (below) This shows the base assembly. It's important to mark the center of the base and back piece, then line up the marks and pre-drill three holes through the base and into the back piece. Attach the two pieces using screws.



My partner let out a couple yelps, and between the gusts, I could almost swear I heard a gobble—but then again it might have just been wishful thinking. He did not hear anything, but after seeing the look on my face, he let out a couple more yelps. This time there was no mistaking it—the bird was close and coming in quick, so we dove for cover and, within seconds, there he was strutting at 12 yards, searching for a lonely lady. It was over as quickly as it all came together, and once the photos were wrapped up, it was time to get to work.

However, after that trip, I knew this bird needed to be displayed nicely on the wall. So I did what I usually do with my trophy gobblers. I made a do-it-yourself mount out of the fan feathers. Here's how it's done, beginning as soon as the bird is down.

## STEP #1

### Remove Tail and the Beard

Locate the base of the tail feathers or fan and cut it off so all the tail feathers remain attached together. When in doubt, leave extra meat as it can always be trimmed up later. Next, remove the beard and again be sure to



cut more when in doubt. These can be left on ice or refrigerated for a couple days if needed.

Once home, where you can spread out and work, it's time to get the fan ready for drying. Start by trimming any extra meat or bone that was left on in the field. It's important to take your time during this step to make sure you get the fan laid out just how you like it, because this is basically how it will look when it's finished. Using your trophy photos is a good way to double check of its most natural display and make any final adjustments.

Use the finish nails into the drywall or cardboard to spread out the feathers, paying close attention to the spacing. Placing the nails closer to the base minimizes the risk of damaging the larger tail feathers where the most visible damage should be hidden by the smaller feathers.

Next, use a couple nails or thumb tacks to secure the beard to the drywall and carefully stretch it out to fully display the length. Lastly, sprinkle some borax on the meat and add some weight, a battery, for example, to the fan to help it cure flat. Drying will take several

## 4 TIPS

- > **Pre-drill any holes to avoid splitting.**
- > **Note any splits where the wood has separated along the grain over the years before making any cuts, because the wood may literally end up in pieces.**
- > **Plan your cuts and attachments to hide fresh cut ends and fasteners.**
- > **Using a dull blade on your skill saw will burn the ends as it cuts, adding to the rustic look.**

weeks, to a month, so store the fan in the garage or shed where it won't be damaged.

## STEP #2 Choosing the Wood

The display can be as elegant, classic, or as simple as you'd like it, limited only by your imagination. Exotic woods with intricate shapes and angles, traditional woods like oak or walnut cut to simple shapes with routed edges, or woods from the many commercially available mounting kits all work well for showcasing your prize.

Weathered barn wood, combined with a basic rustic design, was my choice for this project considering I'm not much of a finish carpenter and lack many of the proper tools. You can even knock out a few doors in farm country, and you can usually find an old farmhouse or feed lot with plenty of wood to spare. Usually, just a simple hand shake is all you'll need to acquire the lumber.

I lucked out, because my father-in-law has more old out buildings than he knows what to

**After the fan has properly dried, center it on the base and hold it in place using a couple of the finish nails.**







do with. After a bit of searching, I came home with several pieces of rough wood sawed at 1x6. Of course, with the old lumber, keep a sharp eye out for old nails, knots or weathered stains, which will only add character to the finished product. A simple “L” shaped base is easy to build and maintains the rustic look whether sitting on the mantel, a shelf, or attached to the wall.

## STEP #3

### Trimming to Size

The bottom piece pictured in the accompanying photo is the base of my wooden mount, cut to 20 inches then ripped at 4 inches wide. The middle piece is the back of the display and was cut to 18 inches. The top piece will be the most visible centered in front of the fan

*(above, top)* The wood screws will attach through the pre-drilled holes into the back of the center piece that is centered on the base and fan. Be sure to hold pressure on the center piece while driving in the screws.

*(above, bottom)* Attaching the beard is the final step, and using the shotgun brass from the fatal shot is a great way to bring it all together.

*(opposite)* This fan mount is very versatile and will look great mounted inside the house or out!

and serves several purposes, such as securing the fan and displaying the beard. It's cut to 5 1/2 inches. Be sure to cut this piece from a raw end to keep the look clean.

Mark the center of the base and the back piece, then line up the marks and pre-drill three holes through the base and into the back piece. Attach the two pieces using the screws.

After the fan has properly dried, center it on the base and hold it in place using a couple of the finish nails.

## STEP #4

### Attaching the Center Piece

Avoid damaging your fan and drill the hole where the beard will be mounted prior to attaching the center piece. Mark center and use a 3/4-inch spade bit to drill about two-thirds of the way through the center piece—careful not to drill completely through.

## WHAT'S NEEDED FOR THE JOB



### TOOLS

- > Knife for trimming extra meat
- > Shears or scissors
- > Hammer and 1-inch finish nails
- > Saw
- > Drill and drill bits

### MATERIALS

- > Piece of cardboard or drywall
- > Barn wood – a single 6-foot piece is plenty
- > 1 1/4-inch screws and wood glue





The three screws will attach through the pre-drilled holes on the back side and into the center piece that is centered on the base and fan. Be sure to hold pressure on the center piece while driving the screws in. Lastly, adjust the tension on each screw to align and straighten the center piece.

## STEP #5

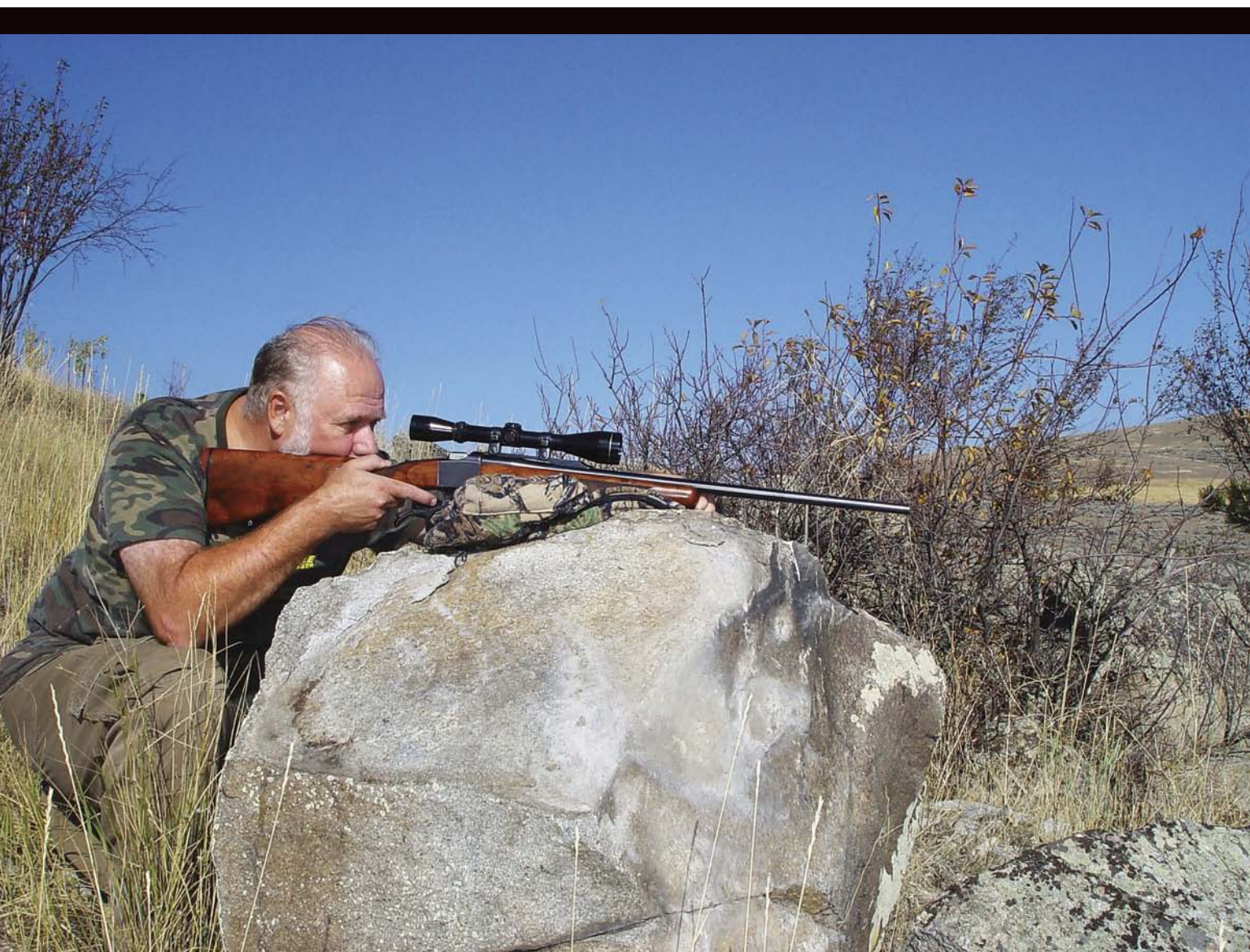
### Attaching the Beard

Attaching the beard is the final set, and using the shotgun brass from the fatal shot is a great way to bring it all together. Start by trimming away the plastic hull and then use the shears to make a small notch roughly 3/8-inch wide. This is easier said than done, but don't worry if the other edges get mangled a bit since they will be hidden for the most part.

Lastly, use a bit of wood glue to attach the brass and beard to the center piece. Try not to use too much glue, as residue can take away from the appearance. The mount is now complete! **MP**







PHOTOS BY AUTHOR

# TIPS FOR DEER

IF YOU WANT TO BAG MORE BUCKS IN THE FUTURE, FOLLOW THIS SEASONED ADVICE.

**By Thomas C. Tabor**

**· HOW-TO ·**

**W**e all know hunters that successfully harvest their deer each and every season. Most of the time, these hunters are said to be “lucky,” but in reality luck has very little to do with it. Instead, it’s largely skill. To be consistently successful at “tagging out,” you must be predator-like, know your rifle and equipment, and have a thorough understanding of your prey. I’ve pursued deer for many decades. During that time, I’ve been fortunate enough to draw on the experiences of other hunters more experienced than me, and other times, I have learned the hard way through my own errors and screw-ups. The following are a few tidbits of information that I’ve picked up along those many trails that you may find beneficial in your own encounters with this very formidable opponent.



## TIP #1

### Stay Hidden

The shortest distance between two points is a straight line, but when it comes to hunting, the best path to take usually isn't a straight line. We're often tempted to cut across open fields in order to reach a more prosperous-looking location, but doing so can expose a hunter to prying eyes.

Working slowly around the edges of trees and brushy areas, taking full advantage of the darkness it provides, will frequently allow you to stay undetected by the sharp eyes of your prey and still get you to your preferred destination. In addition, by staying out of the open, the wind can't as easily distribute your scent to those always-alert nostrils of a deer. So, stay smart and out of sight. This tip alone will heighten your ability as a successful hunter.

## TIP #2

### Use a Solid Rest

In order for any firearm to perform as intended, striking its target exactly, the trigger must be squeezed slowly, and the bullet must leave the muzzle precisely in the same manner. While a barrel may seem rigid and unyielding, when a shot is fired, the barrel actually



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*"In order for any firearm to perform as intended, striking its target exactly, the trigger must be squeezed slowly..."*

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(top) Deer know their environments like we know our own home. If something looks out of place, they won't waste time vacating the area.

(left) Successful deer hunters know how to "stroll" through the hills, sneaking and peeking with tremendous patience.





PHOTO BY THINKSTOCK

undergoes a series of violent vibrations and gyrations that can affect the flight of the bullet. Those movements are often referred to as the harmonics, and for the best accuracy this element must stay the same from shot to shot.

Many things can affect harmonics: firing shots in rapid succession can result in heating up the barrel (which could change the contact points between the stock and the barrel), the bore of the rifle may be in poor condition, load variations can vary, and the wrong choice in a rifle rest can certainly have an effect. Consistency is the key element here.

When it comes to shooting in the off-hand position, I must admit that I'm not as proficient as I would like to be. To an observer, I probably appear like a lovesick teenager drawing hearts in the sky with the end of my gun barrel. So, because of this inability, I always look around for a place I can rest my rifle on. If a fence post is available, I will use it. If a tree is present, I will rest against the side of it. If a boulder is around, I will position my rifle on top of it. And, if none of these things are readily available, I will shoot in the prone or sitting position, preferably with the assistance of a bi-pod.

But a very important word of caution is recommended here. Resting your rifle stock, or worse yet, resting your rifle barrel against a hard, non-cushioned surface can only end in disaster. Doing so is one sure way to change the movement or reaction of the barrel and send your bullet off course. So before plopping down your gun on that hard rock or other unyielding surface, use a piece of clothing, your pack, or even your own hand to cushion it. Remember, it's the small things like this that make the difference in hitting your target and long-term hunting success.



**(above, left)** Always practice from your tree-stand perch to decipher the best holding/resting method. **(above)** In cold-weather, staying hidden from deer is even more important, as human bodies stand out well against stark, white snow. **(below and inset)** Using a bore-sight to get your first shots on paper works great, but the act of bore sighting should always be followed up by actual live-fire on the range in order to fine-tune the sight-in. **(opposite, top)** Don't ever skyline yourself on an open ridge. A deer can see this "odd" visual a mile away.

PHOTOS BY AUTHOR







*“Unusual patterns, silhouettes or shades of gray that don’t fit will get picked up almost instantly by deer.”*



## TIP #3

### Watch Your Profile

Many years ago, a well-schooled hunter once told me that I must learn to see natural habitat just like a deer would see it.

He said that a deer doesn’t see color but different shades of light and “grays.” Unusual patterns, silhouettes or shades of gray that don’t fit will get picked up almost instantly by deer. This means, sky-lining yourself on a ridgeline, or wearing shiny-surface clothing will get you busted for sure.

He also noted that a deer’s environment is no different than our own home. In stand-hunting or still-hunting conditions, it’s critical to leave nature exactly the way you found it, and to keep your presence as unobtrusive as possible, again, so you don’t stick out like a sore thumb. A deer knows his area like we know our living rooms. Move something around or leave lots of human scent on the ground and a deer will know it, just as if a sloppy, stinky creature came through our own living rooms.

So, to be more successful, you must be aware of your surroundings and just as cunning in your approach as a deer is likely to be. Leaving no stone overturned may be a slight exaggeration, but extra hunting effort always adds up to increased success.

## TIP #4

### Choose the Right Target

On many occasions I have had fellow hunters tell me that they like to shoot for the neck or head region of an animal. The usual rationale behind those actions usually goes something like this: “I shoot for the neck (or head) because it always results in a either a clean kill or a clean miss.”

But, in reality, there simply couldn’t be any statement more wrong than that one. The effective kill zone for both the head and neck are extremely small and, in a hunting-type situation, even at close-range those targets can be very difficult to hit.

On the other hand, the areas around those intended targets are much easier for a bullet to impact and those areas can result in wounding the animal to where it would die of a slow and limbering death from starvation or from a slow loss of blood and shock. A much better place to send your bullet is the heart and lungs area. On a deer, this combined area is the size of a large-dinner platter and a bullet anywhere in this area will render a sure and humane kill, dropping it quickly.



## TIP #5

### After the Shot, Stay Alert

Bowhunters know that once the arrow has been sent to its intended target it's best to wait a while before trying to recover the animal. Rifle hunters, on the other hand, generally don't follow this rule as well as they should.

Frequently, hunters are very anxious after taking the shot. They jump up quickly and fast walk to where they saw the deer fall. Unfortunately, what appeared to have been the last fading signs of life in an animal can quickly be replaced by a burst of renewed energy. You chose your shooting position thinking it was the best available at the time, so why not stay anchored in that mode until you are absolutely sure that a second follow-up shot isn't necessary? Generally, it only takes a few moments to assess the situation and be assured the animal is anchored for good. And in the event that a follow-up shot is needed, you will be set and ready to make it happen.

## TIP #6

### Inspect the Barrel Tip

Mistakes sometimes happen in any activity, but when it comes to firearms, a blunder can sometimes be deadly and/or very costly. For example, if something becomes lodged inside the bore of your firearm and goes unnoticed, it sets the scene for disastrous consequences. What might appear to be a minor blockage of snow, dirt or mud can result in extensive damage to both the firearm, as well as to you, if the gun is fired.



(above, top) This fine mule deer buck was brought down by Tom's wife, Donna. (above, bottom) The author with a nice buck he shot in open-country. Without a solid rest, a well-placed shot would've likely been impossible.



## ZERO-IN FREQUENTLY

Most shooters recognize the fact that if their rifle is dropped or the scope is bumped it can adversely affect shooting accuracy. But, there are other less-obvious events that can negatively affect your shooting as well.

For example, removing the stock during cleaning operations, changing the tightness of the stock screws, removing and replacing the scope and even slight variations in the climatic conditions can all attribute to changing the impact of your sight-in.

The zero on my rifles frequently change somewhat, even when they don't leave the gun case. This amazes me. Variations in temperature and humidity can result in metal-to-wood changes that can modify shot vibrations and bullet impact. A rifle is a fine-tuned instrument and it does not take a great deal of variation to affect how it shoots. In order to help ensure that your bullets will be impacting where you want them to you should routinely and frequently check your rifle before leaving on a hunt. —T.T.



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*“By lingering back and using the natural surroundings to hide your approach, it will make you a better hunter.”*

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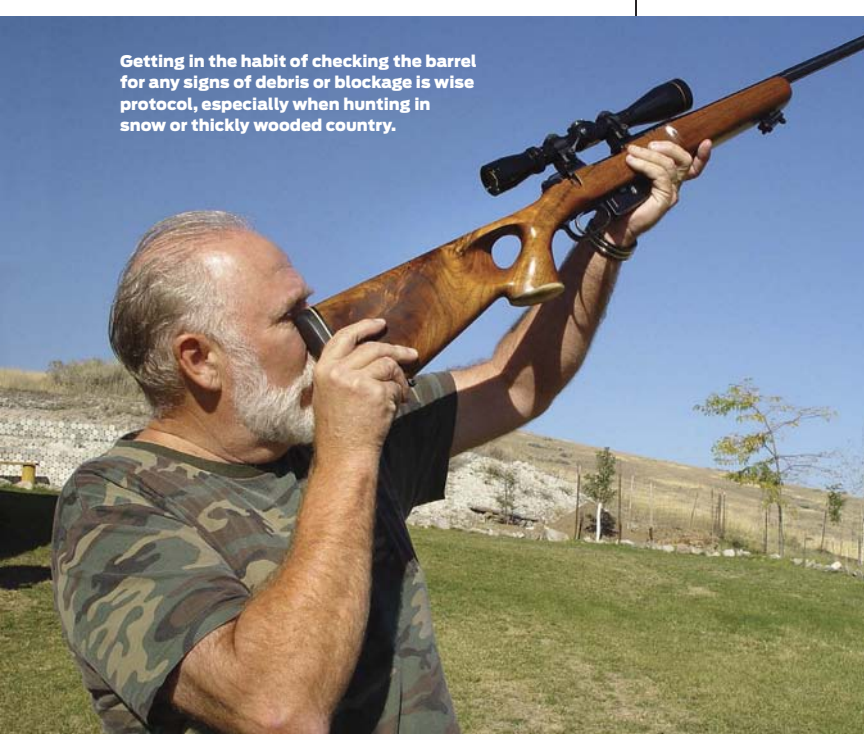
I've seen the result of these blockages far too many times and quite honestly the possibility of this happening to me scares the living bejeebers out of me. To clear my mind of such concerns, I frequently check the bore of my rifle whenever I think there is even the slightest possibility of something lodged inside of it. No, I don't peer down into the muzzle of the loaded firearm; instead, I unload the gun, open the action and look down the barrel to make absolutely sure there is no blockage present. I frequently do that after crossing a fence, after a fall or even after working my way through a snow-laden woodlot. Just the act of doing so removes any concerns or questions I might have, and a clear mind will always work toward better shooting.



**This shows what a clogged barrel can result in.**  
 (inset) **The author stumbled on hilly ground resulting in driving his rifle barrel into the ground. This blockage could have easily have went undetected and if it had been disastrous consequences could followed.**

PHOTO BY THINKSTOCK

**Getting in the habit of checking the barrel for any signs of debris or blockage is wise protocol, especially when hunting in snow or thickly wooded country.**



## TIP #7

### Work Slow and Glass a Lot

The vast majority of deer hunters work through an area far too fast. By lingering back and using the natural surroundings to hide your approach, it will make you a better hunter.

By taking a few steps, and then pausing a while, you'll provide yourself with more time to look for game and to look for fresh sign on the ground. But aside from that, sometimes an old wiry buck may see a fast-moving hunter as an opportunity to stay put and hidden from sight. If, on the other hand, the hunter takes a few steps, stops and looks around a bit, it can result in unnerving the animal, causing him to break from his hidden position.

The key to tagging out more isn't all that complicated. Sure, you can get lucky every now and then. But if you want to be consistently lucky, then you'll need lots of skill and some proven methods for success. This article revealed some tips that have worked for me over the years, and I hope they do the same for you. **MP**







# Flintlock Clean

TRY THIS SIX-STEP PROCESS FOR A FAST, CLEAN MUZZLE-LOADER. **By Mike Yancey**

**T**hey say that the work begins when your game hits the ground. Well, with a flintlock weapon, the work begins when the smoke clears. There is nothing more rewarding to me than handling and shooting a fine flintlock rifle. But for years, I dreaded the chore of cleaning my rifles and, to tell you the truth, I didn't do all that good of a job doing it.

Back in the old days, so to speak, the common way to clean a muzzle-loading rifle was to remove the barrel and clean it in a bucket of hot soapy water. While this will do the job to some degree, I have discovered a much better method.

This method was shown to me years ago by my good friend and rifle builder, Neal Brown of Mississippi. It's a very simple and effective method. I have used this technique on my rifles for years, and my barrels are as clean as the day I got the guns.

## Making the Solution

To begin with, you need to make a cleaning solution. This is a homemade cleaner made up of equal parts of Murphy's Oil Soap, hydrogen peroxide and alcohol. I mix up a big batch at a time and store it in a dark container to protect the solution from the light. However, you can mix up a small amount each time as you clean the gun.

## Cleaning Process

### Step #1

Once you have the solution made, simply remove the lock from your rifle, put a toothpick in the touch hole at the breach, and pour about half of a cup or less down the barrel. Once in the barrel, take your cleaning rod and,

with a cleaning jag and patch, swab the barrel a couple of times to work up the solution and cause it to fizz in the barrel.

### Step #2

While your barrel is soaking, use this time to clean your lock. Do this by pouring a small amount of the cleaning solution in a container and, with a brush of some kind, give the lock a real scrubbing inside and out until all the smoke and powder fouling is gone. Lay the lock aside for now and go back to your barrel.



Items needed to make the cleaning solution: alcohol, Murphy's Oil Soap and hydrogen peroxide. Use equal parts of all three to make the solution.





*(left, top)* Put a toothpick into the touch hole of the barrel after removing the lock and then put the solution down the barrel.

*(left, center)* Be sure to clean the barrel around the touch hole with brush and solution.

*(bottom, left and inset)* With cleaning jag and plenty of cleaning patches, remove the toothpick and run patches down the barrel until the patches come out clean and dry.

*(bottom, right)* Once the barrel is clean and dry, run a patch containing heavy oil like Three-In-One, mineral oil or even 30-weight. Put the lock back on, do one final wipe down of the barrel with an oiled cloth, and then clean all of the wood parts.



### Step #3

Remove the toothpick from the touch hole, making sure not to break it off in the hole and drain all the solution from the barrel. Do this by running patches down the barrel until they come out clean and dry.

### Step #4

Take the brush and solution to clean the outside of the barrel around the lock and touch hole area.

### Step #5

Now that your lock and barrel are clean and dry, you need to oil the lock, as well as all barrel surfaces (inside and outside) to prevent rust. The solution cleans so well that you must oil all parts well to prevent rusting. This is a simple matter of what type of oil you want to use.

If I'm going to be storing my rifle for a while, I will run a patch of regular 30-weight motor oil or mineral oil down the barrel and then wipe down the lock and outside of the barrel with Three-In-One oil. The purpose of the heavy oils is that they won't evaporate and will keep protecting your parts from rusting.

### Step #6

The final step to a clean and rust-free rifle now is to put the lock back on the rifle and give all the wood parts a good cleaning with a clean, damp cloth to make sure no cleaning solution is on the finish of the stock. Now, simply give the rifle one more final wipe down with a clean, dry cloth and store for future use, knowing that while it's put away no harm will come to it, specifically from the corrosive effects of black powder. **MP**





# DRESSING THE FLINT

Another helpful tip to get as many as 50 more shots out of your flint is to dress up the edge of it when it quits sparking. After 50 or so shots, a flint will either quit sparking or not spark well at all. This can be fixed quite easily while flint is still in the cock. All you need to do is get another sharp edge on your now-dull flint. This can be done in two simple steps, and once you have made the tool to do it, it will be done in one simple and easy step.

## Step #1

With a 16-penny nail and a file, cut a small notch into the nail; this will be used to place on the tip of your flint and unloaded gun. Keep one of these nails in all of your shooting bags, so you will be able to use it when the need arises.

## Step #2

Now, simply tap the nail with light blows, working the nail along the edge of the flint and causing the edge of the flint to chip off in small chips, resulting in a sharp clean edge that will spark like a new one. —M.Y.

(top) This is the type of nail used with small notches used to dress a dull flint that has stopped sparking. (bottom) Be sure to hold the nail in a straight line with the flint, then tap the nail to remove small chips of material from it. Remember, you need to move the nail along the very edge of the flint after each tap. This will create a fresh sharp edge along the flint.



Handling and shooting a flintlock is a true pleasure, but function and accuracy only come when the weapon is clean and well lubricated.



# BUDGET

LOW COST IS THE NEW TREND IN DEER RIFLES.

*By Thomas C. Tabor*





# GUNS



**I**t only takes a quick perusal through a catalog a few years old to see how prices have escalated on all things shooting-related—and that includes the cost of firearms. Manufacturers typically and justifiably place much of the blame for those escalating prices on the increased costs of labor and material. But let's look at a potential way of saving some money when purchasing a new rifle.

I'm reluctant to call it a “trend” just yet, but a few manufacturers have begun to offer some very attractively priced centerfire hunting rifles that are of good quality. They have been able to do that through very careful engineering practices and design changes that have resulted in reducing their in-house costs, which they then pass on to their customers in the form of lower sticker prices.

Here are a few examples of those rifles. I've tested each of them and found them to be of exceptional value. I have included the manufactured suggested retail price (MSRP) of these rifles, but keep in mind that with a little shopping around, you can sometimes trim those prices down considerably.

## **Ruger American**

A few years ago, Ruger did what I would characterize as an exploratory run of a new model rifle they called the American. Initially, the caliber choices were limited, but as the popularity of this rifle began to grow so did the caliber selection and the optional choices within that series.

Today, in addition to what Ruger calls their Standard rifle, which is available in either a left or right-hand version, there is a Compact, All-Weather, Predator and Ranch version. And, if you are not overly thrilled about having to then shop for a scope to go on your new rifle, Ruger offers an all-inclusive deal called the Redfield Scope Package, which includes a Redfield Revolution 4-Plex scope mounted on the rifle.



*“Ruger’s new Marksman Adjustable Triggers (RMA) allow the trigger pull weight to be adjusted easily and effortlessly.”*



Many similarities are intertwined between all of the submodels. With the exception of the All-Weather Model, which is a stainless-steel version, the rifles come with a matte blue finish, and most are available in either the Standard or Compact version. The Predator comes with a moss-green-colored composite stock, and the Ranch Model has a flat dark-earth-colored composite stock.

I tested one of the Ruger American Standard rifles, chambered in .243 Winchester, and found it to perform flawlessly. It came equipped from the factory with one of Ruger's new Marksman Adjustable Triggers (RMA), which allows the trigger pull weight to be easily and effortlessly adjustable. From the factory it was set at a conservative 4 pounds, 5 ounces (5-pound pull average). I

personally prefer my triggers set a little lighter and eventually set it down to 3 pounds, 8 ounces. In order to do so, it was simply a matter of removing the stock and making the adjustment by turning a single Allen-headed adjustment screw. Turn the screw in one direction and it results in increasing the pull weight; turn it in the opposite direction, and the weight is lessened.

The black-colored synthetic stock came equipped with a Ruger's Power Bedding™ System, which consists of two stainless-steel bedding V-Blocks that have apparently been molded directly into the body of the stock during the layup process. The barreled-action mounting bolts pass through these blocks, thereby interlocking the stock and barreled action securely together. The detachable





**Ruger's American rifle is a very functional and strikingly attractive.**

magazine is of Ruger's own rotary design, which I found to feed the cartridges smoothly and perfectly every time.

The barrel was hammer-forged and free-floated, and the receiver was drilled and tapped for scope bases, which are included and installed on the rifle. These are the typical two-piece Weaver-style mounts that fit a wide variety of scope rings. My .243 weighed a modest 6.25 pounds, but the weights vary depending upon the submodel you select, ranging from a low of 5.90 pounds up to 6.38 pounds. There is a wide range of calibers to select from, which include many of the most popular non-magnum cartridges, but not all are available in every submodel and, in the case of the American Ranch Rifle, it's only available in 5.56 Nato or .300 BLK. Ruger re-



**The composite stock on the American is textured to provide a sure and firm grip.**

cently even added a rimfire American to the line that comes in a variety of rimfire choices.

One of the concessions made to keep the cost of the Ruger American down came in the area of the trigger guard. While many rifles utilize a separate piece for the trigger guard, on the American, it's actually an integrated part of the actual molded synthetic stock. Being a more traditional type of guy, I'm not overly thrilled with this particular feature, but it did enable the company to save a little on the cost of manufacturing the rifle and, overall, it looks fairly good and functions okay.

The Ruger American is priced at \$449 for either a left or right-hand version of the Standard rifle. The all-weather models run \$529, and both the Predator and Ranch Rifles carry a price tag of \$489.

### **Savage Axis XP**

At one time, the name Savage Arms was equated with cheap and low-quality guns that the national chain stores sometimes carried. It's likely that stigma helped to speed Savage's ultimate demise, eventually sending the company into bankruptcy. However, a man named Ron Coburn came along and pulled the company out of the muck and mire. He not only brought it back from its impending doom, he made it run better than it ever had.

As part of Coburn's restructuring efforts, many of the company's models were dropped from the production lines and a heavier concentration was placed on making the few surviving models better than ever. Above all, Coburn wanted his Savage rifles to be some of the most accurate production rifles available.

The Axis was one of the company's new additions, and it quickly became a rousing success. With the rifle weighing only about 6.5 pounds and being very conservatively priced, it had a lot of appeal to hunters both in the U.S. and abroad. The available calibers covered most of the popular non-magnum choices, including: .22-250, .223, .25-06, .270, .30-06, .308 and 7mm-08.



Savage Arms' Axis II XP includes a Weaver Kaspas 3-9x40mm scope mounted at the factory and the rifle boresighted.



While many rifles have a separate piece for the trigger guard, the American utilizes an integrated part of the actual molded synthetic stock.



Unlike the original Axis rifle, the new Axis II XP comes with the excellent Accu-Trigger installed.

*“Over several months of shooting, many three-shot, 100-yard groups maintained an overall average slightly less than 1½ inches, with the smallest group measuring less than ¾ inches.”*

The Axis II XP followed, which essentially made a good rifle even better. It included a mounted Weaver Kaspas 3-9x40mm scope and the rifle bore sighted at the factory. Unlike the original Axis rifle, the Axis II XP comes with the very favorable Savage Accu-Trigger that has the capability to be adjusted down to very light trigger pulls while remaining safe for use in the field. The Axis II XP also comes with a black synthetic stock, a detachable-box magazine, a carbon-steel barrel and a matte black finish over the entire rifle for only \$489.

I tried out one of these rifles chambered in .223 Remington. Over several months of shooting, many three-shot 100-yard groups maintained an overall average slightly less than 1-1/2 inches, with the smallest group measuring less than 7/10 inches. That is pretty impressive accuracy for any rifle—and especially for one that is priced so affordably.

In addition to the adult versions of the Axis II, there are a couple of submodels specifically designed for young shooters. These come with stocks that are scaled back to fit shorter arms and are available in several stock colors, including black, Realtree camo and even what the company calls their “Muddy Girl,” which is colored in a very attractive pink camo pattern.

#### **Thompson Center Dimension**

With its sticker price of \$689, you may wonder why I would include the Thompson Center (T/C) Dimension in an article about budget firearms. But even though the initial cost to purchase a Dimension is higher than the two





(above) The 100-yard accuracy of the Axis II XP was excellent. (below) While the T/C Dimension stock may appear somewhat different from the norm, it is very functional and well designed.

other rifles mentioned here, the unique design of this rifle can actually work to save the owner some fairly substantial money in the long run.

Some hunters simply are not satisfied to only own a single rifle caliber. While in a pinch that deer rifle chambered in .30-06 can certainly be used to deter a pesky fox or coyote that is attempting to gain access to your hen house, but, given the choice most shooters would prefer a caliber a little smaller like maybe something in the neighborhood of a .223 or .204 Ruger. Obviously, purchasing a second rifle means a doubling of your costs, but does it?

What would you think if, rather than having to purchase an entirely new rifle, you could simply buy a new barrel and be able to easily and quickly switch back and forth between the cartridges? That would be the ultimate form of recycling—and that is exactly the concept behind the Thompson Center Dimension rifle.







*“The T/C Dimension is an extremely versatile rifle that is even adjustable in stock length by simply adding or removing a series of spacers located between the buttstock and the recoil pad.”*

At the center of the T/C Dimension design is what the company refers to as its Locking Optimized Components (LOC). In order to swap out the barrels and the calibers, you only need to loosen the torque collar, which connects the barrel to the action. When the barrel is free, the replacement barrel is slipped into place and the torque collar tightened back down using the T/C LOC Torque Tool (which doubles as a tightening tool and a torque wrench combined).

The entire conversion procedure usually takes less than five minutes to perform, culminating in an entirely new caliber to shoot. Because the scope is mounted to the barrel, most shooters find it most convenient to have a scope specifically dedicated to each barrel and, in this case, once the barrels have been swapped, the rifle is good to go, with no need to rezero its point of bullet impact.



The unique switch-barrel design of the T/C Dimension allows the shooter to change the caliber of the rifle by swapping barrels and, in some cases, changing a few other parts. The T/C LOC tool is needed for removing and installing the barrels.

*(top)* The length-of-pull of the Dimension stock is adjustable by simply removing or adding spacers located between the buttstock and the recoil pad. This feature makes it an excellent choice for young shooters, allowing the stock to “grow” along with the youngster.





The T/C Dimension with the .308 Winchester barrel installed was responsible for putting a little meat in Tom's freezer in the form of this nice fat mule deer doe.

There are currently 10 cartridge choices to select from, ranging from varmint calibers like the .204, .223 and .22-250, up to and including magnums like the 7mm Rem. Mag. and the .300 Win. Mag. Within those cartridges choices, there are four family groupings that T/C categorizes and identifies as A, B, C or D. As long as the cartridges stay within one of these categories, all you need to purchase in order to change the caliber of the rifle is the barrel. But if you should move outside of that particular family group, you may have to also purchase other components, like a magazine to fit the new cartridges and/or a rifle bolt. Additional barrels sell for \$254.

My first major exposure to the T/C Dimension came a few years ago, on a Wyoming prairie dog shoot. In this case, I was using a .22-250 chambered Dimension that was topped with a Weaver 4-20x50mm Tactical Model scope. That combination produced some amazing shots. One involved a hit on a

## CONTACTS

**Savage Firearms**  
SavageArms.com

**Ruger Arms**  
Ruger.com

**Thompson/Center**  
TCArms.com

tiny dog at the amazing range of 560 yards using Federal Premium factory-loaded ammo.

Upon returning from that trip, I decided to order another rifle for further testing. That rifle was also chambered in .22-250, but came with a second barrel in .308 Winchester. After thoroughly running it through its paces on my rifle range, that winter my wife and I were able to add a nice fat mule deer doe to our family meat locker, using the .308 barrel and shooting Hornady Custom factory-loaded ammo with 165-grain bullets. The shot was at 200 yards and, after running a short distance, the doe toppled over dead in her tracks.

The T/C Dimension is an extremely versatile rifle that is even adjustable in stock length by simply adding or removing a series of spacers located between the buttstock and the recoil pad. This has the ability of changing the length of pull from 12.5 inches to 13.5 inches, making it a great choice for a young shooter who can grow with the rifle. **MP**



# [Bushcraft]



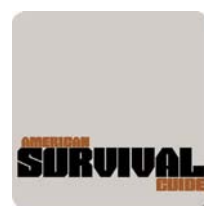
*"Our lives begin to end the day we become silent about things that matter."*

—MARTIN LUTHER KING, JR.

PHOTO BY THINKSTOCK



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· SPECIAL ·

# Backcountry Carpentry

WHEN YOU NEED TO BUILD  
A SOLID WILDERNESS  
STRUCTURE, REMEMBER,  
YOU DON'T ALWAYS NEED A  
HAMMER AND NAILS.

*By Larry Schwartz*



**A**lthough carpentry normally involves saws, hammers, nails and screws, in the backcountry those were not always needed, nor were they even available. Instead, the pioneers of those days, and the modern pioneers of today, use lashings of rope, cord, or wire to attach staves and sticks together to make frames for tables, chairs and buildings, as well as repairing items like tent poles and pack frames.





*“Although carpentry normally involves saws and hammers and nails and screws, in the backcountry, those were not always needed, nor were they even available.”*

## WHEN TO USE WHICH LASHING

The following table shows some common uses for each of the lashings described in this article.

Uses	Square	Shear	Diagonal	Round	Tripod
Combining or repairing poles				•	
Bridges	•	•	•	•	•
Tables and chairs	•		•	•	
Racks of all sorts	•		•	•	
Towers or elevated platforms	•	•	•	•	•
Shelter frames	•		•	•	
Sleeping platforms	•		•	•	
Tripods for for water containers					•
Tripods for holding cooking pots over fires					•
Fences	•		•	•	

### Choosing Your Lashings

From a backcountry carpenter's perspective, there are only five types of lashings needed to satisfy the basic needs of construction.

- Square lashings are used to bind two poles together at right angles. They are excellent if you want to build a square or rectangular frame.
- Shear lashings are used to join two poles which are laid next to each other, and then spread apart to make a “V” shape. They are best used to make the legs of a structure, which need to be both tight and flexible.
- Round lashings are used to join two poles together that are laid next to each other with one end overlapping the other. They are best used to make longer poles from shorter poles or to repair a broken pole.
- Diagonal lashings are used to join two poles which cross at a diagonal. They are best used to creating supporting struts or where a square lashing would be used if the poles were at right angles to each other.
- Tripod lashings are used to do just what the name implies: It joins three poles together to make tripod. They are best used to create a stable base for a platform or for hanging things, such as a pot over a fire.

Now that you know what these basic lashings are for and how to make them, the next time you need something more sophisticated than a straight stick, you won't have worry about whether you packed it in your vehicle or have it in your bug-out bag. You will be able to make it yourself. The next time you pause to set up camp or spend the weekend working at your bug-out location, grab some rope, an axe, and a saw, and try your hand at making some improvements that don't require a hammer and nails. **MP**

## SOME BASIC TERMINOLOGY

**Bend:** A knot, such as the Sheet Bend, used to connect two pieces of rope.

**Bight:** Made by folding a piece of rope into a “U” shape; this can be done either at the end of the rope or somewhere in the middle, depending on what you are trying to do. See “Loop,” below.

**Frapping Turns:** Additional turns added in another axis to bind a lashing or whipping.

**Hitch:** A knot used to attach a rope to some object such as a hitching post or tent peg.

**Lashing:** To bind together two or more staves with rope for a variety of purposes.

**Loop:** Made by passing the ends or parts of the rope over each other. See “Bend” above.

**Racking Turns:** Lashing turns which pass between poles to bind better against the pole. They are used in tripod lashings.

**Running End:** The part of the rope that is manipulated to make the knot; also called the working end, tail end, live end, or tag end.

**Standing End:** The part of the rope that is not manipulated to make the knot; it is often connected to something else.

**Turn:** One pass of the rope round or through an object.

**Whipping:** A binding knot used to prevent a rope's end from fraying.





**CLOVE HITCH:** The Clove Hitch can be used to quickly attach a rope to a pole, or with lashings to anchor the rope at the beginning and end of the lashing.

**How to tie it:** Pass the end of the rope around the pole. Continue over the standing end and around the pole a second time, making an "X." Thread the running end under itself and pull tight to form the Clove Hitch.

**Cautions about its use:** When used as the starting knot for a lashing there is no concern, but if it is used by itself, the knot can come undone if either of the running ends are pulled in the opposite direction.



**TIMBER HITCH:** The Timber Hitch is used for handling cargo, as it practically falls apart when tension ceases. It is also useful when towing a spar or log either afloat or on land. When used for this purpose, the Timber Hitch is often placed near the center of the spar, and a separate Half Hitch is dropped over the end of the spar to act as a guide. The same hitch is known as a Bowyer's Knot because it attaches the end of the bow string on a longbow.

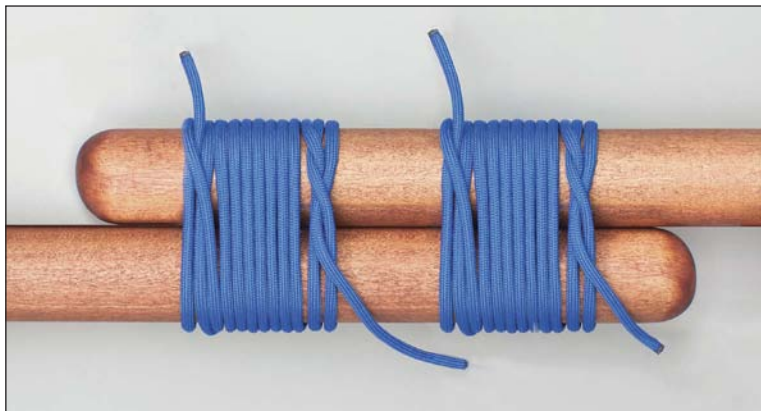
**How to tie it:** Pass the end of the rope around the pole and then around the standing end. Wrap the end around itself three times and tighten the knot so that the three turns grip against the pole.



**SQUARE LASHING:** The Square Lashing is used to bind two poles together. The lashing is designed to be load-bearing and can be used to create scaffolding. Although the two poles usually cross each other at 90 degrees, the Square Lashing may be used when the angle between the two poles is as little as 45 degrees.

**How to tie it:** Start with a Clove Hitch around one pole. Twist the short end around long and wrap the rope around both poles, alternately going over and under each pole about three or four turns. Tighten the lashing by surrounding it with three or four frapping turns. Finish with two or three tight Half Hitches.

*"[Scout Engineering] contains an excellent overview of pioneering skills and tools, as well as explanations of how to build different structures using just rope and wood you find in the backcountry."*



**ROUND LASHING:** The Round Lashing is used to lash two parallel spars together to make a longer one.

**How to tie it:** Start with a Clove Hitch around both poles. Wrap six to eight turns around the two poles. Finish with another Clove Hitch. Two Round Lashings can be used to make a longer pole.

**Cautions about its use:** Many descriptions warn about the difficulty of making the lashing tight enough to be secure. A common recommendation is to hammer two wedges between the poles, one above and one below the lashing. This tightens the lashing and makes it more secure.

## OLD SKILLS AND NEW TECHNOLOGY

> Apps on a smartphone have become ever-present sources of reference information for a whole spectrum of topics. The ability to combine descriptive text along with photographs and videos makes them an ideal vehicle for teaching the use of knots and lashing techniques.

To the best of our knowledge, the only app to combine a wide array of knots with an equally comprehensive list of lashings is Animated Knots, by Grog. This app is available on both the iPhone and Android platforms.

App Name	Win Desktop	Mac Desktop	iPhone	iPad	Android
Animated Knots, by Grog	\$6.95	\$6.95	\$4.99	\$4.99	\$4.99





**TRIPOD LASHING:** The Tripod Lashing is used to form three poles into a tripod.

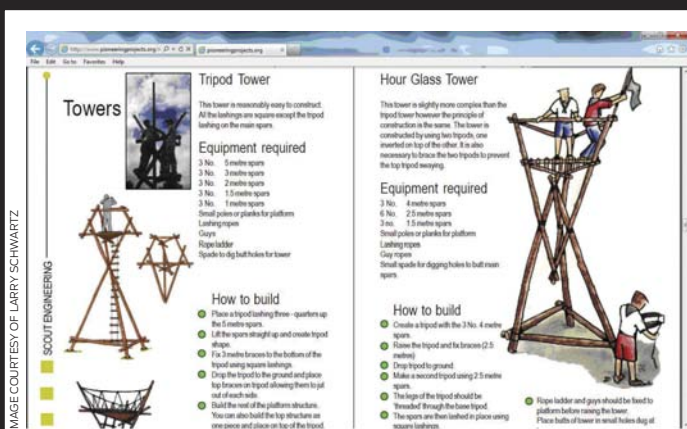
**How to tie it:** Start with a Clove Hitch around the first pole. Wrap about six racking turns around the three poles; a racking turn means to alternate the rope over and under the poles. Make two or three tight frapping turns in the two gaps; a frapping turn means to wrap the rope in the gap between two poles. Finish with a Clove Hitch on the third pole. Cross the two outside poles to form the tripod. Some descriptions start with the center pole extending in the opposite direction from the two side legs.

**Cautions about its use:** Forming the tripod twists and tightens the lashing and can even break it if it is tied too tightly. A lashing which is too tight or extends for too great a length may either prevent the tripod from being formed or may overload the rope. In this respect, the Tripod Lashing differs from other lashings: It is possible to make it too tight! On occasion, trial and error may be required to obtain the correct tension.



**SHEAR LASHING:** The Shear Lashing is used to lash the ends of two poles together. The other ends are separated to make a pair of Shear Legs.

**How to tie it:** The two poles are laid side-by-side and an initial Clove Hitch is tied round one pole. A Round Lashing is then tied around the two poles near one end. Then two or three frapping turns are tied to bind the lashing turns tightly. Starting these turns can be awkward. It is sometimes necessary to spread the legs apart to open up the poles to make it possible. The lashing is completed with another Clove Hitch.





# [Survival]



*"We all strive for safety, prosperity, comfort, long life, and dullness." —ALDO LEOPOLD*

PHOTO BY THINKSTOCK



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·HOW-TO·

# Building a Fire the Old-School Way

HOW, WHEN AND WHY TO USE A FLINT-AND-STEEL SYSTEM IN THE WILDERNESS. By Mike Yancey

**M**any survival experts claim that you need at least three forms of fire-making methods with you at all times when in the woods. Other than the obvious—matches or a lighter—my favorite method is the old-time flint-and-steel method in which you use a piece of charred cotton cloth, a piece of flint rock and steel to strike the flint, which throws a spark to be caught in the char cloth. This system is very effective in windy conditions, whereas the same cannot be said for other primitive fire-starting methods.

The more the wind blows, the hotter the flint gets—instead of blowing it out the way it would a match or lighter. In this article, I will explain not only how to make fire using a flint and steel, but how to make and gather the materials needed to start a fire using this method.



*“The more the wind blows, the hotter the flint gets.”*

PHOTO BY THINKSTOCK







(right) **Step 1: What You Need to Make Char Cloth** — A tin can with lid, 100-percent cotton material and the cotton char cloth that has been charred and ready to use.

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“Old cotton shirts work well for making char cloth, as does woven cotton-webbing material, which is my favorite.”

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Items needed for a flint-and-steel fire ignition are simple and, with the exception of the steel striker, can be found most anywhere. However, you will need to obtain a good-quality fire steel, but you can get them from most blacksmiths or traditional-knife makers. The other items needed are a piece of flint stone and char cloth.

Char cloth is the key item here, as it is what catches the spark from the flint and steel. Char cloth is made from 100-percent cotton cloth that has been put in a can and sealed up with a tiny hole for gases to escape, then thrown into a fire until only the charred material is left.

### **Making the Char Cloth**

In the accompanying photo (Step 1), you can see the tin can used in making the char cloth along with the 100-percent cotton materials used to make the char cloth. This is a

simple quart can with a lid that can be hammered on, sealing the material in the can. A small hole has been drilled in the lid to allow gases to escape when in the fire, but the hole isn't so large that it allows air in, causing the material to burn up in the process. Old cotton shirts work well as does woven cotton-webbing material, which is my favorite.

Place the cotton material in the can and fill it up—but don't stuff it or it won't char evenly. Seal the lid and throw the can into a fire. The next accompanying photo (Step 2) shows how the smoke and gases will begin escaping the can like a jet engine, which is good!

The next photo illustrates that a small jet of fire will erupt from the hole, which is normal. Roll the can a quarter turn while it is in the fire and repeat until no more smoke or fire is coming out of the hole.

Next, roll the can out of the fire and set it aside for an hour or so, just long enough for





**(above) Step 2: Place it in Fire**  
 — Place the canister in the fire and watch the smoke and gases as they come out from the can. This will make char cloth. Don't become alarmed by the flame shooting out of the can. When all smoke and flames stop coming out of the hole, the can is ready to be removed and allowed to cool before opening the can to inspect and try out the char cloth.

**(left) Step 3: Tools for the Fire**  
 — This is all you need to make a flint-and-steel fire: a steel striker, flint chip, char cloth and dry tender.





(above, top) **Step 4: How to Strike the Steel** — This shows the proper way to hold the char cloth in relation to the flint chip. With the cloth sticking out about a half an inch under the flint, strike the flint with the steel striker, sending sparks into the cloth. (above) **Step 5: Catching a Spark** — A spark is caught on the cloth and ready to be placed into dry tender and blown into a flame. (opposite, top) **Step 6: Blow the Cloth** — Blow on the char cloth. It's now nearly made into fire. (opposite, bottom) **Step 7: You Have Fire** — Get ready to be warm or to cook!

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*“The downside, if there is one, is that you must have the cotton char cloth, and it must be kept dry at all times.”*

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the char cloth to completely cool down. You can even cover the hole in the can to prevent air from getting into it, causing the char cloth to ignite.

### **Testing the Cloth**

Now you have finished the char cloth and the raw cotton cloth. The next step (Step 3) shows the steel striker and flint chip, along with the char cloth and dry tender needed to make a fire.

The next illustration (Step 4) shows how to hold a piece of the char cloth in relation to the piece of flint. Place the char cloth under the flint with a small bit of the cloth sticking out below the stone. Now, with your steel striker, make a light glancing blow, causing sparks to be made and thrown into the char cloth. The next step (Step 5) shows the first tiny glows of sparks that were caught on the char cloth. Don't rush; you have plenty of time. As you see the char cloth starting to glow, it's ready to be placed into a nest of dry tender material and blown into a flame.

### **Making Fire**

The next photo (Step 6) shows the char cloth placed into some dry tender and paper, then being held above your head slightly to allow the smoke to rise. Simply blow on the char cloth until it bursts into flame, then place it into your prepared fire materials. You should wear gloves at first when doing this or use a large amount of tender to prevent the





heat and/or flames from burning your hand as you begin to blow on the material. Obviously, it does get very hot in the process, especially just before it ignites. The last photo shows the char and tender bursting into flame.

### Pros and Cons

This is a very cheap method to make fire and can be used in the home or cabin every day. The materials, other than the steel, can be made and/or found just about anywhere. Best of all, the flint-and-steel method excels in windy conditions, which is very useful in the wilderness.

The downside, if there is one, is that you must have the cotton char cloth, and it must be kept dry at all times, as well as having to carry the items needed to make the fire. I carry mine in a small tin container along with the flint and steel. Another challenge is finding a good-quality steel striker. If you can't find a blacksmith to make you one, you can visit the website [CrazyCrowTradingPost.com](http://CrazyCrowTradingPost.com), which sells several styles—all guaranteed to spark. **MP**









# Mountain Shelters: Their Highs and Lows

IF YOU'RE INTO WILDERNESS BACKPACKING, EXPLORING OR HUNTING, A GOOD LIGHTWEIGHT TENT OR SHELTER IS A MUST. HERE'S HOW TO CHOOSE THE RIGHT ONE. **By Aaron Snyder**

**S**helter options for the back-country explorer are at an all-time high, and a worthwhile one is going to have a similarly high price tag.

It can get confusing looking through all the tent, tarp and bivy-sack options available today, and finding your best option can cost you a great deal of time and money before you get it right. Not that long ago, a dual-wall, three-season, two-man tent would have tipped the scales at five pounds, but, thankfully, that kind of weight is a thing of the past.

Here are the most popular tent/shelter categories available, along with my recommendations. →

PHOTO BY THINKSTOCK






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*“If you travel/hunt in areas that get pounded by early-season snowstorms or heavy rain (i.e., Northern Idaho, the Pacific Northwest), then I would not suggest a three-season shelter.”*

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**Bivy sacks offer the least amount of protection in the elements, but they work in fast-packing situations in fair weather. Otherwise they can make for miserable use in heavy wind and rain, and when changing out your clothes.**



### Three-Season Tents

The three-season tent is the most popular choice for wilderness travelers, offering a very lightweight package with a decent amount of protection from the elements. You won't get much warmth out of it because the inner wall is just bug netting, the fly is usually six inches above ground and the material has given ultra light a new meaning.

On a positive note, it will keep you dry in a decent rainstorm, protect you from a small amount of snow and shield you from pesky mosquitoes and bugs. The average trail weight for a one- to two-person, three-season tent should put you just under three pounds. But companies like Big Agnes (Fly Creek) and Easton (Kilo) have been able to give you just over two pounds with their two-person models.

I don't use a three-season tent anymore, but my suggestion for their best-intended use would be for summertime exploring and early-season bowhunting (June through September). If you travel/hunt in areas that get pounded by early-season snowstorms or heavy rain (i.e., Northern Idaho, the Pacific Northwest), then I would not suggest a three-season shelter. They are a bit fragile under a heavy snow load or wind and, over time, eventually fail in extreme conditions. This is not to say that they won't work, but even the top-rated tents in this category are not designed for heavy mountain use.

Any of the dual-wall, three-season tents near the two-pound range have a very fragile outer



shell/fly. This isn't a huge deal if the weather is perfect, but if you throw in some high wind mixed with snow, the guy lines have the potential to pull right out of the tent walls, and the poles can easily collapse as well.

### Through the Winter

I've spent a lot of time in four-season shelters (Hilleberg Akto, Integral Designs MK1), and they definitely have a place during various hunting and trekking seasons. They are generally heavier than the other options in this article, but when the weather turns bad and temps drop, you'll be very glad you packed one.

The outer shell, or fly, of the four-season tent isn't much different from its lightweight brother mentioned above. But the outer shell is pitched tight to the ground (less wind) and the interior wall is made up of a completely different material. It doesn't have bug netting, but instead a more "dense" type of material that helps retain your body heat on the inside. The fly is also made of a different material (usually), but if

**(opposite, top left) Three-season tents make great lightweight shelters, but due to their light-fabric and net-like materials they are not the best going into cold spells in the high country. Joe Bell photo**

**(opposite, top right) Even in mid-September bad weather can strike. Be sure your shelter is of top quality and has a full-length rain fly to guard against cold snaps. Pictured is the excellent MSR Nook. Joe Bell photo**

**(bottom) Tipi-style shelters offer great versatility for the serious wilderness goer since they go up fast, are lightweight and offer spacious protection. Thinkstock photo**

you don't know what you're looking at it would be hard to notice the difference.

The four-season, dual-wall tent is a great choice for backpackers or hunters who always break their gear or travel in heavy rain or snow areas, as they do extremely well in high wind and hold together as well as any other shelter.

These kind of shelters are also a great choice for "above timber" hunts where you'll be much more exposed to the elements. A good example of this would be mountain-goat hunting, where these creatures very rarely dip below tree-line. Your best option is always coming in from above them.

The only real downfall to the four-season tent is the weight (and you can't add a stove), but if you like to prepare for the worst-case scenario, then take a hard look at this option.

### Bivy Sacks

A bivy sack only offers protection for you, leaving all your gear exposed to the elements. You can always wrap a trash bag around your





gear, but that will only protect it during the storm—using it during the storm can be a real pain. Yes, it has a place in the backpacking world, but being stuck inside a laminated coffin with no overhead cover for days on end can drive you insane!

There are some good things about using a bivy sack as a stand-alone shelter: It sets up quickly (in a few seconds), adds 10 to 15 degrees to your sleeping bag's rating, weighs very little and doesn't take up much room in the pack. The most important things I look for in a bivy sack are breathability and E-vent material, which this delivers like no other. The Integral Designs Bugaboo Bivy and Big Agnes 3 Wire are my suggestions, and I've had nothing but good experiences from both models.

The options on the market today for the bivies are endless, and there are big differences from one model to the next. Some have poles or hoops at the head area and give you a great deal of room, while other models wrap around you like a burrito and only give you enough room for a small pillow. There's also a

big difference in the entry, as some only have a zipper at the head area and others have a full-length zipper (50-72 inches) and are much more user-friendly for those middle-of-the-night bathroom breaks.

When I take a bivy for a wilderness outing there's usually a reason having to do with weight, the area I'll be sleeping in, or both. So, if you're trying to save every ounce you can, camp in cliffs or don't expect to be stuck in your shelter for days at a time, then a high-quality, breathable bivy sack is something to consider.

### Bivy/Tarp Combos

The bivy/tarp combo is one of the most versatile systems you'll find, allowing you to pitch in just about any terrain and also handle any weather/temperature that Mother Nature can throw at you. You won't get much of a weight savings with this compared to the four-season shelter and will probably come in a little heavier than you would with a three-season setup. But you will gain a lot of versatility when running both the bivy and tarp combined.

**(below) Four-season tents are similar to three-season models, but they come with thicker fabrics and additional pole supports to withstand harsher weather that prevails in the extreme high country, especially during mid to late-fall.**



PHOTO BY THINKSTOCK



My go-to shelters when using this system are the Kifaru SuperTarp or ParaTarp and Integral Designs Bugaboo Bivy. The ParaTarp does not give you as much protection, as it's much smaller than the SuperTarp, but it gives you enough protection and would probably be my suggestion if you were just going to run a bivy and tarp.

The Bugaboo Bivy and ParaTarp weigh 37 ounces—stakes and guy lines included. That's about the same weight as the equivalent three-season shelter, but don't forget that you have the option of taking along a lighter-weight sleeping bag, because the bivy adds several degrees to its temp rating.

Most of my backpack hunts are a mixture of different styles (spike camp, bivy and base camp). When hunting like this, a handy option is leaving your tarp in one area with some gear and packing your sleeping bag and bivy sack with you when you set out for the day. This gives you the option of staying on a particular animal or area, if needed, without freezing your butt off in the middle of the night. This is not preferred all the time, but when the situation calls for it, it's nice to have the option.

Sleeping on the side of a mountain in a deer bed is becoming common practice with my hunting partners and me, and this system is better than any other in this situation. You can stake the tarp straight to the ground on the high side and use your trekking poles to pitch the tarp on the low side. This allows you to glass straight from your sleeping bag and gives you protection from the sun and common afternoon rainsqualls the Rocky Mountains are known for.

### Tarp/Stove Combos

For the past few years I've been gradually moving toward the tarp/tipi direction and now



PHOTO BY JOE BELL

use them for just about everything. You won't get a floor with them, but that's not a bad thing as you won't need to worry about tracking in mud/dirt, and their weight savings and versatility make them worth their weight in gold!

The thing about the tarps I use during hunting season (Kifaru SuperTarp and MegaTarp) is that they use trekking poles to erect them, and ultralight, packable stoves can be added when temps drop later in the season. That means I'm saving over a pound in weight from tent poles alone when compared to any other shelter (I always bring trekking poles), and I also have a "do-all," year-round shelter with the added stove.

(above) This MSR Hubba-Hubba is one of the best tents on the market in terms of quality, space-to-weight ratio and overall function.

## QUALITY AND VALUE IN ONE

> Cabela's new XPG Ultralight Three-Person tent was designed for extreme performance in every way. This lightweight (3-pound, 12-ounce) tent features a strong, weatherproof DAC pole-system and design, along with a 1,800mm-rated rainfly and 2,000mm-rated polyurethane/silicon-coated bathtub style floor for that no-fail protection against major downpours. The tent also has high and low vents to increase air circulation when the temps begin to soar and you need a nap. Other useful details include overhead gear storage and an included 75-denier waterproof footprint to protect the bottom of the tent against rocks and damp soil. The tent retails for \$399. To learn more, visit [Cabelas.com](http://Cabelas.com).





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*“Even large tarps (10' x 10') compress down to something less than the size of a 1-liter bottle, weigh around 16 ounces and can be pitched in multiple ways.”*

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Even large tarps (10' x 10') compress down to something less than the size of a 1-liter bottle, weigh around 16 ounces and can be pitched in multiple ways. Seeing as I live in Colorado and find it almost impossible to find a flat spot at 11,000 feet, the options to pitch the tarp flat or angled have paid off multiple times. This has proved much easier and quicker than regular “tent pole” shelters and is far more versatile for my hunting style.

As far as adding a stove to your tarp, there's nothing better than getting your gear together in the morning or preparing your dinner at night in an 80-degree shelter—especially when it's 15 to 20 degrees outside! The ultra-light, packable stove lets you dry off your wet clothing or boots, prepare food and, of course, gives you a better attitude when hunting in extremely cold conditions.

After reading about the tarp/stove combo, you can see why this system is hard for me to pass up. It's versatile, lightweight and takes up little room in the backpack. The only downside is when you're camping above tree-line in cold conditions (no wood for the stove). That's when I incorporate a bivy with the tarp instead of the stove.

When you spend as much time in the wilderness as I do, you start to realize that a warm, versatile and lightweight shelter is not easily found but is definitely needed to stay mentally focused and physically strong. These are the reasons I have moved to the tarp/bivy/stove combo, but everyone's situation is different. You may prefer a completely different shelter system. Just make sure that you take every variable into consideration before your purchase in order to make the right decision. **MP**







(left) The author usually prefers a four-season tent over a three-season version for hard-core wilderness outings. One tent that he's used successfully for this is the Hilleberg Akto, pictured here.

(below) Kifaru's MegaTarp is a superb wilderness shelter based on its weight and overall pitching options.

(right, top and bottom) Kifaru also makes the SheepTarp and ParaTarp to give bivy sack users a bit more "livability."



## SOURCES

BigAgnes.com | CascadeDesigns.com/MSR  
EastonOutfitters.com | HilleBerg.com | Kifaru.net



· SPECIAL ·



# Natural Navigation

12 WAYS TO  
DETERMINE YOUR  
DIRECTION  
WITHOUT A  
COMPASS

By **Larry Schwartz**

S ometime around the year AD 1100, the Chinese developed the first practical compass for helping people navigate in unknown territory. But before that auspicious day, mankind had other ways to know which way was north, south, east and west that didn't involve using a tool. They used what was around them and what they saw happening in nature to determine direction. With a bit of training and understanding of some basic concepts, so can you.







PHOTO BY THINKSTOCK

## Finding Direction in the Field During the Day

**1. Terrain Association:** The easiest way to tell direction, especially if you have a map or know the direction that Point A is from Point B, is to use terrain association. This is what we all do when we use a topographic map without the aid of a compass. It's also what we do every day when we walk or drive somewhere familiar, since we know which way to turn at each landmark or, for example, that the high ridge is our northern boundary. The next few techniques we can use during a day afield involve the sun and a watch.

**2. Sunrise and Sunset:** First, since we know that the sun rises in the east and sets in the west, if it is still rising (in the morning), then it is in the east; if you put the sun to your right, then you are facing north. The opposite is true after high noon: Put the sun on your left and you are again facing north. If it is 12:00, the sun will be in the south in the Northern hemisphere and in the north in the Southern hemisphere.

The sun only rises and sets due east and due west on two days out of the year: the spring and autumn equinoxes. Any other day, it will rise and set slightly to the north in the Northern Hemisphere and slightly to the south in the Southern Hemisphere; in other words, in the U.S., it rises more from the northeast rather than the east. The farther you get from the equator, the more it moves from due east or due west.

**3. Use Your Watch as a Reverse Sundial:** This technique requires an analog watch (the kind with hands on it). Hold your watch flat with the face pointing up. Point the hour hand at the sun. Then draw an imaginary line dividing the acute angle formed by the hour hand and 12 o'clock on the watch face. Ignore the minute hand, you don't need it.

This imaginary line is your north-south line. In the Northern hemisphere, the line points to the south. In the Southern Hemisphere, it points to the north. If you can't remember that, then figure out east or west like we just discussed and you know north. One caveat with this method is that if your watch is set for Daylight Savings Time, you should use 1 o'clock instead of 12 o'clock.

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*"The sun only rises and sets due east and due west on two days out of the year, the spring and autumn equinoxes."*

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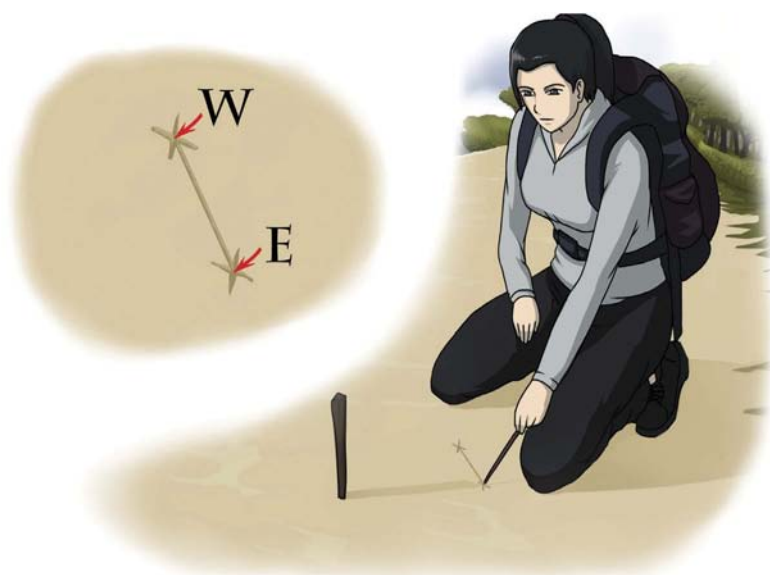
**You can turn your watch into a compass by pointing the hour hand at the sun and then bisecting the angle formed by the hour hand and 12 o'clock to find south.**



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*“Satellite dishes in the Northern Hemisphere will all be pointing to the south; those in the Southern Hemisphere will be pointing north.”*

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**In the Northern Hemisphere, using a stick, you can watch the shadow move from west to east, and then mark the four cardinal directions on the ground.**



**As illustrated on the Alaska state flag, the two stars at the end of the bowl in the Big Dipper point toward the North Star, Polaris.**

**4. A Shadow Stick:** The next daytime technique is to use a shadow stick to determine an east-west line. The shadow stick takes a bit longer to use than the sun and your watch, but it lets you draw a compass rose, or diagram, on the ground so you don't have to figure out north each time. Start by placing a foot-long stick into the ground and pointed straight up. You want to be able to see its shadow. The ground should be level, flat and cleared of any brush or anything that sticks up above the ground. Next, place a marker, such as a small stone or a twig, into the ground at the end of the shadow. After about 15 minutes, the tip of the shadow will have moved a few inches. Mark the very tip of the shadow the same way as you did the first time, then draw a line between your two markers.

Since the sun always moves from east to west, the shadow will move in the opposite direction. The first marker is west; the second marker is east. You can now add a north-south line on the ground, and you have your compass rose showing the four cardinal directions. You can then add in the intermediate directions if you need.

### **Finding Direction in the Field at Night**

Just as the sun was your best friend for direction finding during the day, the stars and moon are your go-to celestial objects at night. And, just like with the sun, the techniques at night are also based on the movement of the Earth in relation to the stars and moon.

**5. Find the North Star:** Polaris, the North Star, will always mark north in the night sky. It is not one of the brightest stars in the night sky, but you can use the two pointer stars in the Big Dipper to find it. The pointer stars are the two stars that form the front end of the ladle in the Big Dipper. A line drawn from the bottom pointer star through the top pointer star will point to the North Star. The North Star is also the last star in the handle of the Little Dipper.



**6. Shoot the Stars:** Just like the shadow stick that you used during the day, you can use the two sticks at night to determine your cardinal directions. On a clear night where you can see at least one star, align two sticks like the back and front sights on a rifle so that they “aim” at a bright star. After waiting 15 minutes, the star will have moved from where it was when you aimed at it originally. If the star moved up, it is in the east. If it moved down, it is in the west. If it moved left, it is in the north. If it moved right, it is in the south. This is for the Northern Hemisphere, so reverse it for the Southern Hemisphere.

**7. Use the Crescent Moon:** The last nighttime technique is to use the crescent moon to find south. If you draw a line across the points of the crescent going down toward the Earth, the point where it touches the horizon will be south in the Northern Hemisphere and north in the Southern Hemisphere.

### In The Urban (Or Suburban) Jungle

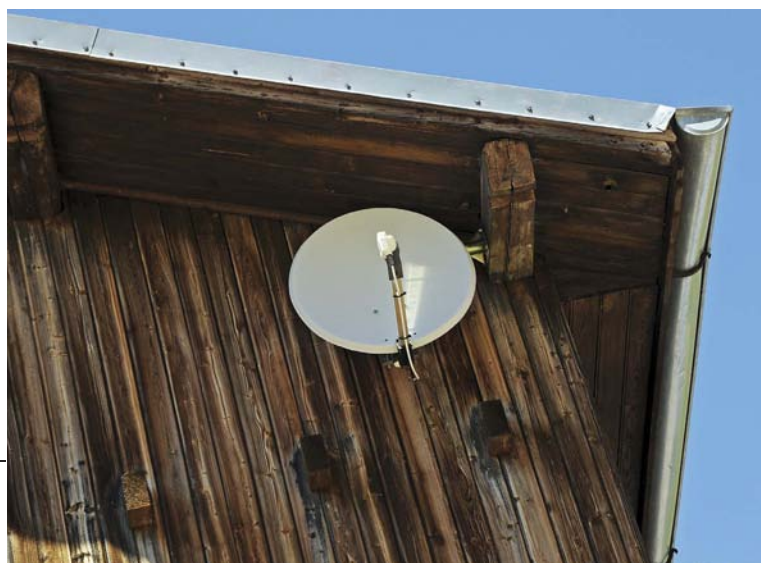
The backcountry isn't the only place we often need to know direction. Trying to navigate in the concrete canyons of a major urban area can befuddle anyone. Fortunately, there are a number of ways to tell direction that are designed for the urban jungle.

**8. Satellite Dishes:** Satellite dishes for television reception all point to one of several communication satellites that are in geosynchronous orbits over the Equator. So, satellite dishes in the Northern Hemisphere will all be pointing to the south and those in the Southern Hemisphere will be pointing north. Since the particular satellite a dish is pointing to may not be exactly due south or north of its location, the direction may be 15 degrees or so left or right. Also, some dishes may be pointed to a satellite far to the left or right, such as someone in New York City trying to watch a station in Italy or Albania, so look at several dishes to get your general direction rather than just one.

(right) Satellite television dishes point at satellites that orbit above the Equator. So, in the Northern Hemisphere they point generally to the south and to the north in the Southern Hemisphere.



A line drawn across the points of the crescent moon will point to south where it crosses the horizon.



PHOTOS BY THINKSTOCK



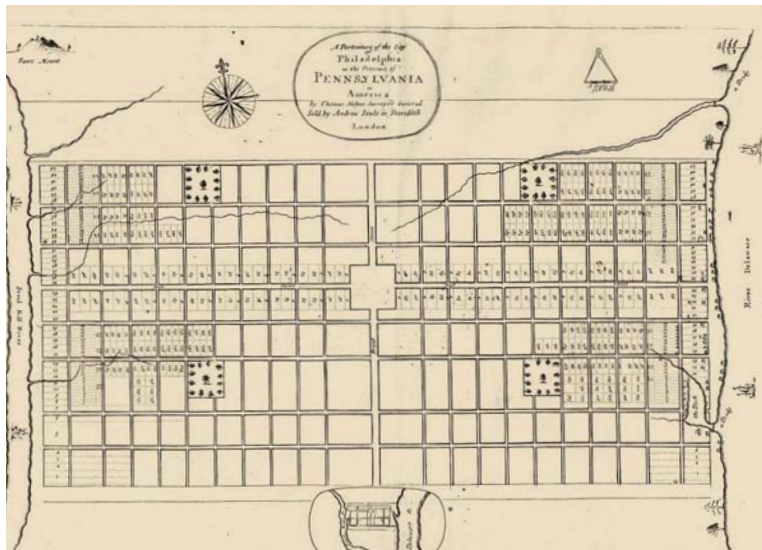


IMAGE COURTESY OF LIBRARY OF CONGRESS

When cities are laid out on a grid, like this one used in early Philadelphia, the avenues normally all run in one direction and the streets at right angles to them.

**9. Streets and Avenues:** Many major cities in the U.S., as well as other parts of the world, are based on a grid work of streets and avenues that cross at right angles. Where this design strategy is used, normally the avenues all go in one direction and streets all run in the other direction. Although each grid-based city may be different (check the city you are in), in general, avenues run north to south, and streets run east to west. If the city has a central road, like Main Street or Broadway, the roads that cross it will often have a direction in their names, such as West First Street or North Highlands Avenue.

**10. Wind Weathering:** In a region with a prevailing or predominant wind, the buildings will have more significant weathering or erosion on their windward side than on their leeward faces. So, with a predominant wind coming from the west, which is what is common in North America, the western facades over time will be more worn from the erosion.

## FACTS AND FALLACIES

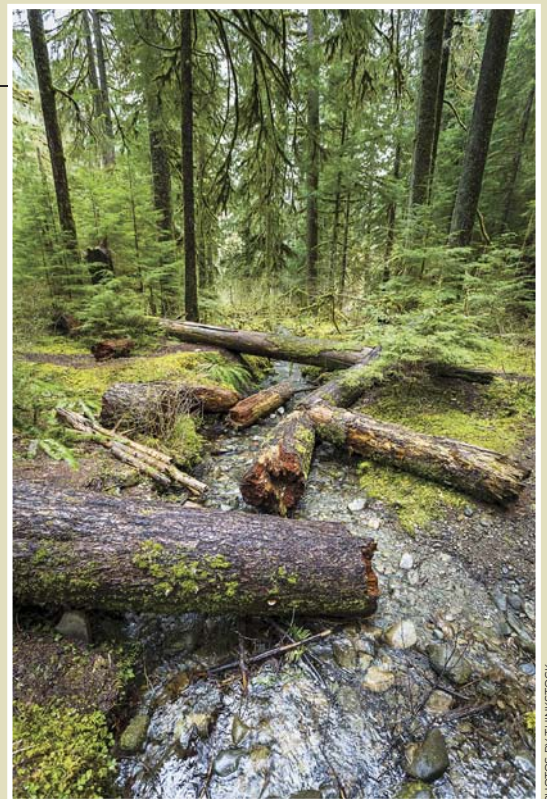
Folklore offers a number of ways to find direction. Some are accurate and some are completely or partially false. Here are a few:



- **Moss always grows on the northern side of a tree or rock. This is partially true, but often confusing.** Moss needs a damp and cool environment to grow. This kind of environment is normally found on the northern side of things: trees, rocks, hillsides, ridges and so on. Unfortunately, we have all seen trees or rocks with moss on all sides. So even though there may be more on the northern side, it isn't a very good indicator of direction for the casual observer.

- **Streams and rivers always flow downwards, or toward the Equator.** Streams and rivers do, in fact, flow downhill, but down does not necessarily mean toward the Equator. They can flow in any direction and do, often changing direction as they follow the contours of the land.

- **Follow a stream, and it will eventually take you to civilization.** If you follow a stream or river, you may eventually run into some kind of civilization because people like to set up near bodies of water. Unfortunately, streams also have a habit of ending in the middle of nowhere. Or worse, they often end up in swamps and marshes, which are places you don't want to be navigating through if you don't know where you are.



PHOTOS BY THINKSTOCK



(right) U.S. Interstate highways that run north to south have odd route numbers, while those running east to west have even route numbers.

## 11. Thank you, President Eisenhower:

In 1956, President Dwight D. Eisenhower implemented the Interstate Highway System as a way to help America stay competitive. One of the benefits of this new system is that they came up with a standard approach for naming the interstates that were part of this national road system. Highways that run north to south will have an odd route number, like I-95, while interstates that run east to west will have an even route number, like the famous Route 66.

## 12. Look to the Clouds:

Like many things of use to the modern pioneer, the things we notice about the world around us are often some of the most useful. On his website, Tristan Gooley, The Natural Navigator, noted that clouds can be a real help when trying to determine direction in the urban canyons. Before you head into a building or down into a subway, look up at the clouds to see which direction they are moving with respect to the direction you want to go. When you come back out into the daylight, look up again to determine which direction you need to turn to get back on track.

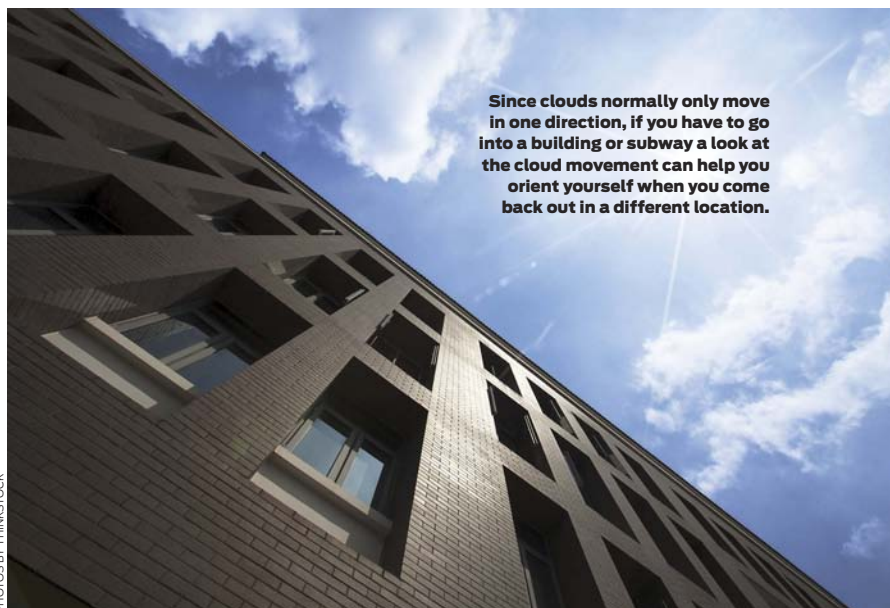
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Well, there you have it: a dozen handy ways to tell direction without a compass or any other navigational tool. Plus, you can use them any time of day and anywhere you may find yourself. Now, take your new knowledge and start practicing it in your daily activities so that it becomes an ingrained skill rather than something you need to think through in an emergency. **MP**

# BUILD YOUR NAVIGATION LIBRARY

The following books are a great starting point for ways to find direction when you don't have a compass.

- *Handbook for Boys*, by Boy Scouts of America
- *U.S. Army Survival, FM -21-76* by U.S. Army
- *Finding Your Way Without Map or Compass*, by Harold Gatty



Since clouds normally only move in one direction, if you have to go into a building or subway a look at the cloud movement can help you orient yourself when you come back out in a different location.

PHOTOS BY THINKSTOCK



# [General]



*“Through our own recovered innocence we discern the innocence of our neighbors.”*

—HENRY DAVID THOREAU

PHOTO BY THINKSTOCK





·HOW-TO·

# Off-Road Recovery Kit

DON'T GET STRANDED IN THE MIDDLE OF NOWHERE. HERE'S WHAT YOU NEED TO KEEP ROLLIN' ALONG.

By **Brian Brown**

**A** fresh blanket of snow covered the ground as I made my way down the overgrown two-track on a cold, December morning. I don't know if I was more excited to call in coyotes that morning or to test out my new Tacoma 4x4.

Either way, at the top of the hill, I made a point to stop to switch the transfer case into low range. I even thought about putting on the tire chains, but then shrugged it off, knowing I only had to go a bit farther. ...➔





**(above)** Driving slow and steady through challenging spots will keep you from making bad mistakes. Resist punching the throttle in such scenarios, allowing the tires and transmission to do the work. **(below)** This is a bad situation to be in, but with a good shovel, gloves and some improvising you can free yourself from this muddy jam.



In actuality, it was cold, and I was just being lazy. The road headed downhill before turning sharply to a side hill through a stand of pine trees, and that's when a patch of ice hidden beneath the snow robbed my traction, and my forward momentum ceased. You know that feeling when you realize you have no control and are forced to accept something bad is about to happen. That's how it felt. Gravity was winning, and I was along for the ride, sliding downhill sideways toward a large old ponderosa that almost seemed like it grew there with malicious intent.

Lucky for me, an exposed root halted what was sure to be several thousand of dollars in repairs. After walking around to assess the situation, it seemed that the tire chains would now come in very handy. I was sure glad I decided to throw them in.

Unfortunately, I soon discovered they were the wrong size, because the new truck's tires were bigger than on my old truck. That was just the beginning of the bad news. I also didn't have my shovel and gloves, along with my tow strap and other tools I usually keep in my old truck. Nice going, bozo, I thought.

PHOTO BY THINKSTOCK



*“There really is no way to be ready for anything and everything, but a tow strap, jumper cables and tool kit stashed in your vehicle is a good start.”*

Stacking a couple dead trees between a big stump and my tires acted as a saver to protect the passenger-side door, as I gave it some careful throttle work to maneuver out of the mess. The ‘yotes stayed safe that morning, because I decided to cut my losses and head home. The only damage was to my ego, but I was still disappointed with myself for not putting on the tire chains earlier or, better yet, transferring my recovery gear to the new truck as soon as I brought it home.

Admittedly, I have earned the nickname “Stuck” from my buddies after a couple of similar mishaps, but honestly—if you spend enough time off the beaten path, it is bound to happen. The nature of driving on back-country roads can be challenging enough. Combined with inclement weather, poor judgment and other drivers causing massive, slippery ruts, and it’s really only a matter of time.

To prepare yourself for such challenges, you need to have an off-road recovery kit.

### Building Your Kit

There really is no way to be ready for anything and everything, but a tow strap, jumper cables and tool kit stashed in your vehicle is a good start. Murphy’s Law—vehicles break down or get stuck at the most inopportune times, like after dark or during bad weather—so a pair of mechanic’s gloves, a beanie (warm hat) and a headlamp are handy, too.

Every vehicle I’ve owned has had a compartment (or two) for storing the jack, and there is usually extra room you can take advantage of for storing this gear. Keep it simple when it comes to tools: a 3/8-inch ratchet with assorted standard and metric sockets for common sized nuts and bolts, a couple boxes of wrenches for the tight spots, a multi-tool, tire plug tool with several plugs, electrical tape, a few hose clamps and zip-ties, all stashed inside a zippered tool bag. Also, don’t forget the duct tape—no tool kit is complete without it!

This minimal, yet practical assortment of tools has been there for me when I had to

## 5 IMPORTANT TIPS



- 1. Tow-Strap Hook-Up:** Be careful where you attach tow rope or heavy chain. Do not attach it to suspension parts or body parts like the bumper. Instead, attach to the tow hook or receiver hitch. Last resort, you can attach to the frame but watch for brake lines or wiring.
- 2. Get Out and Improvise:** Learn to stack rocks and logs to reduce climbing height and approach angles. This technique can also work for positive traction in big, muddy holes.
- 3. Floor Mats are Handy:** Floor mats can be used to keep you out of the mud and snow when making repairs or hooking up a tow rope, but in a pinch, they can be slid under a tire for traction or wrapped around a tree to keep from hurting the tree with a chain or cable.
- 4. Try Different Angles:** Sometimes pulling right up to a stuck truck will only result in two stuck vehicles. Using a tow strap or cable and hardware can be used to pull/winch from different angles or from farther away. Also, remember that switching the direction of the cable using a pulley or snatch block basically doubles the pulling power.
- 5. Forget the Chainsaw:** A bow saw takes up much less room than a chain saw and, with a little effort, will open the road should you encounter a downed tree blocking your path. —B.B.







(above) A complete tool kit with tire plugs is a must-have. Dress yours up with as many extras as possible, including tape and tie-straps. (opposite) Here are some handy tools the author likes to take along on off-road adventures. It includes shovel, axe, saw, Hi-Lift jack, 50-feet of aircraft cable (or chain), shackle and pulleys, mechanic's gloves, replacement belts and tie-downs.

swap out a couple dead spark plugs, a lame fuel pump, and even a seized idler pulley to get me back on the road. It would be easy to try to pack a complete mechanic's tools set. However, with limited parts, there are only so many repairs that can be accomplished in the backcountry without running to town for more supplies.

### Other Important Items

When heading to the hills, I like to add a set of tire chains (or two sets, if I expect really harsh weather), a shovel, an axe, handsaw, Hi-Lift jack, 50 foot of aircraft cable (or chain), and some tackle, including a shackle and a couple pulleys before I set out.

Lastly, it's a good idea to keep an extra serpentine belt and hold on to a couple spark plugs from your last tune-up with the rest of this gear. Make sure to do a dry run with the tire chains at home by putting them on, getting them adjusted, and making sure they will clear your suspension and brake lines, especially while turning the

*“Make sure to do a dry run with the tire chains at home by attaching and adjusting, and making sure they will clear the suspension and brake lines, especially while turning the wheels.”*



## OTHER CONSIDERATIONS

- > **Maintenance:** Timely oil changes and preventive maintenance is the best way to keep your vehicle on the road. During these service checks is a great time to keep an eye out for any small problems like an oil leak or a worn belt that may leave you stranded eventually.
- > **Food and Water:** Keeping some water, a few granola bars and a blanket would make an unexpected night much more comfortable.
- > **Top Off Fuel:** Fill up at the last town you go through, or better yet, bring along a 5-gallon gas can and fill it up, too. If everything goes well, you can top off your tank when you get home, but running out of fuel far from the nearest station spells big trouble.
- > **Spare Tire:** Make sure it's full and fits. If you have changed the size of the tires, make sure not to forget about the spare. Don't forget the wheel lock key, either. On long trips, be sure to take two spares. Otherwise, you'll have to head into town once that first flat occurs.
- > **Karma:** If you see someone else who is broke down or stuck, be sure you stop and help. Remember, that just may be you someday, so put yourself in their shoes.—B.B.

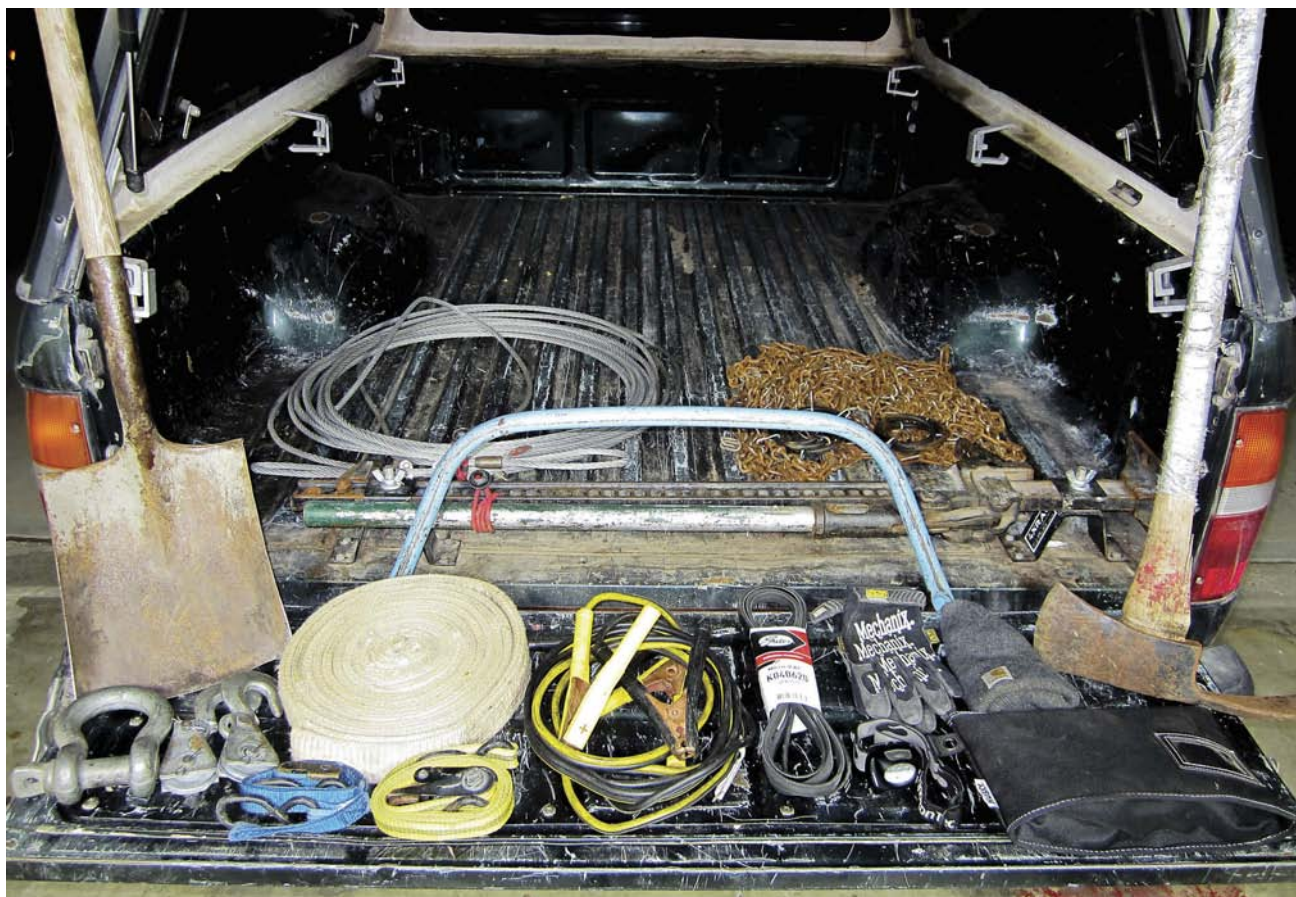
wheels. Doing this in the driveway beats struggling to figure it out when it's snowing or you're stuck up to the axles in mud.

### Bring a Good Jack

Most factory jacks are barely acceptable on pavement, so think about upgrading to a more substantial jack with a larger base for more stability. A better option yet is to purchase a handyman or Hi-Lift jack because, aside from lifting, they also work great as a winch. I have even used the handle as a breaker bar to bust loose stubborn lug nuts and rusty bolts. Be sure to chock the wheels and keep the lifting to a minimum, because they can be fairly unsteady on soft soil and cause serious injury and damage if they tip.

### Most Important Tool

Perhaps more important than anything, always bring along your common sense when heading off-road. It's the most important tool you have. Mashing the throttle or being overly aggressive only gets you into trouble. Be smart. Be wise. Go slow and steady. Do this and you'll reach your destination safely, ready to hunt or fish in a remote honeyhole. **MP**





# USING A HI-LIFT JACK

> Having an electric winch on every vehicle would be great, but they are expensive and not very practical for most folks. Usually, when a vehicle is stuck, just being able to pull it a few feet will allow you to break free. In this case, all that is needed is a Hi-Lift jack, two sections of cable or chain, and a ratchet strap. Here's how to do it right:

**1.** Start by laying the Hi-Lift jack on the ground with the base toward the vehicle and the top toward a solid anchor like a tree or large rock. Choose this spot carefully.

**2.** Lay out the two cables—one from the anchor to the top of the jack—and the other from the vehicle to the jack.

**3.** Attach the anchor cable to the top of the jack (a D-ring or properly sized bolt can really help here). Next attach the other strap or cable to the vehicle and to the lifting portion of the jack. Make sure the jack is fully extended and arrange the cable length so you can take full advantage of the full travel of the jack without repositioning.

**4.** Start operating the jack to tension the cables — you may have to tighten, then release and start again until the slack is removed.

**5.** The most important step is to be careful, especially once the cables tighten up. A good method is to use the ratchet strap to go around the cable and the jack post below the moving portion of the jack. This acts as a limiting strap of sorts and keeps the jack from rotating once under the load.

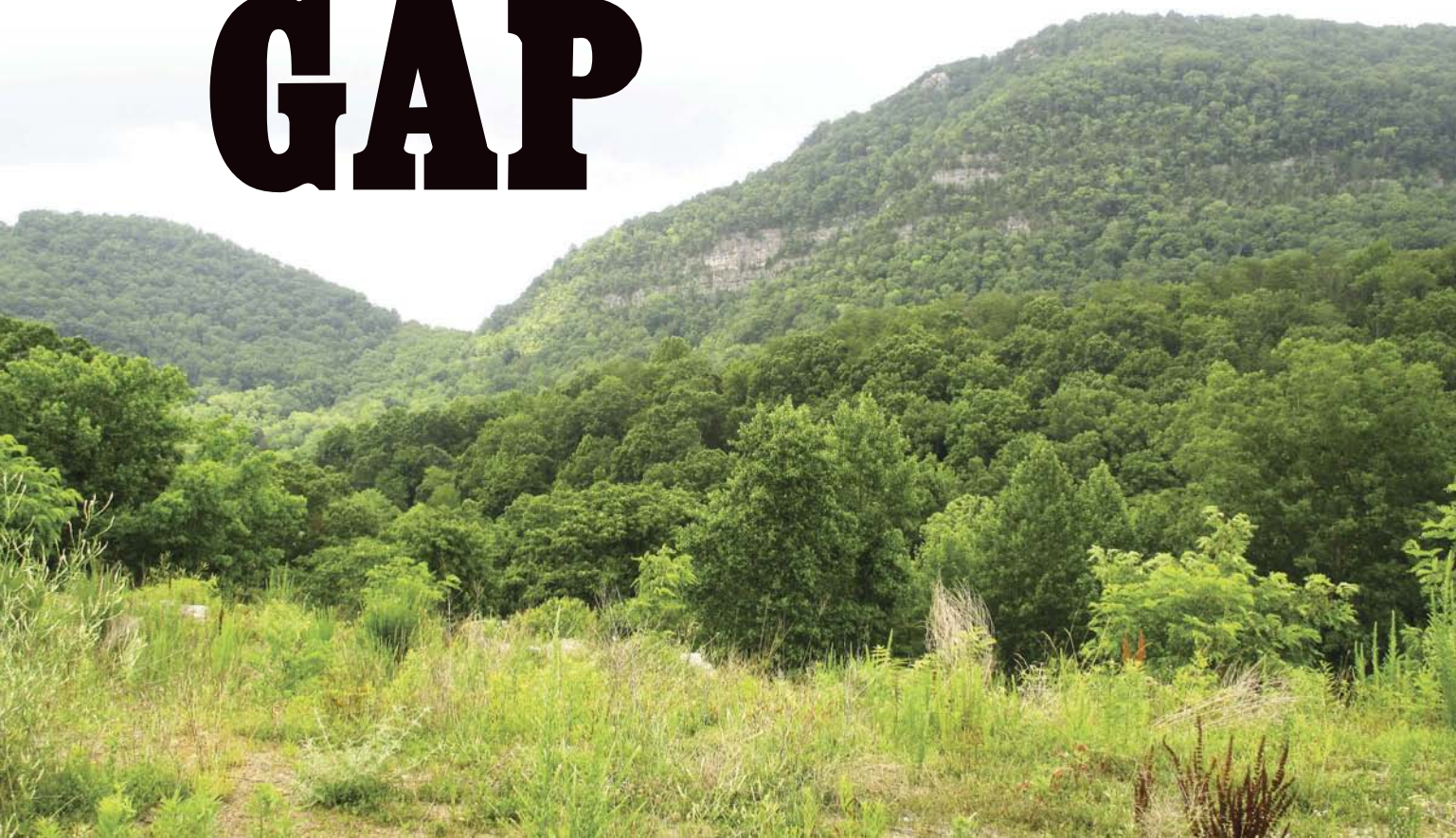
**6.** Now, just operate the jack and start pulling yourself free. If you run out of travel on the jack, chock the tires and reposition the cables so you can start again. —B.B.



PHOTOS BY BRIAN BROWN



# The Cumberland GAP



THIS HISTORIC  
PASSAGEWAY  
REMAINS THE  
MOST FAMOUS  
MOUNTAIN PASS  
IN AMERICA.  
**By Darryl Quidort**

**T**he famous longhunter, Daniel Boone, first crossed through the Cumberland Gap in the spring of 1769 on his way to explore the Shawnee hunting grounds called Kanta-kee (now Kentucky). Boone, a hide-hunter and beaver trapper, was joined in the wilderness that fall by his younger brother, Squire Junior. It's amazing that those longhunters went into the wilderness with nothing but a flintlock rifle and the provisions they could carry on a packhorse to live off the land for months, or even years, at a time.

The hunting and trapping was good, and the brothers collected enough hides to pay off their debts. Hunting in the Kanta-kee wasn't without peril though. Daniel and Squire Boone returned, back through the Cumberland Gap, penniless, their guns, traps, horses and hides had all been confiscated by the Indians with a stern warning to "never return" or they would face death. →

**Cumberland Gap is a low saddle in a wall of rugged mountains that opened the door to westward expansion.**



*“The Gap was the one narrow opening that allowed Americans to begin a great migration to the West.”*

**(above)** This shows the entrance to Gap Cave.

**(right)** Stepping foot at the entrance to the gap makes you visualize those who came before us.

**(opposite)** This is Wilderness Road as it may have appeared in the early 1800s.

### Route Through Wilderness

For many years, a long wall of steep, rugged mountains had kept the American Colonists restricted to the East coast of the country. As the population grew, the frontier was pushed inland, but the wall of imposing mountains stretched from New York south all the way to Georgia. For years, many pioneers longed to see what was “over the mountains.” Then they found the only known passageway in that long, impenetrable wall of mountains, the Cumberland Gap. The gap was a miraculous find, an easy route through mountains that intimidated even Boone. John Filson quoted Daniel Boone saying, “The aspect of these cliffs is so wild and horrid that it is impossible to behold them without terror.”

Historically, the Warrior’s Path went through the gap. The Cherokee went north to fight the Shawnee and vice versa for a century or more before the first Englishman, Dr. Thomas Walker, crossed through the gap in 1750. Indians called the gap Ouasiota, meaning deer pass. Early white hunters called it Cave Gap, due to a natural cave near the saddle of the





gap. Dr. Thomas Walker is credited with naming it the Cumberland Gap, after the Duke of Cumberland.

But it was Daniel Boone, the trailblazer, who opened the gap to hunters, land prospectors and settlers. Cumberland Gap was destined to become the most famous mountain pass in America. The Gap was the one narrow opening that allowed Americans to begin a great migration to the West.

Even after the Indians' death threat, Daniel Boone couldn't get Kanta-kee off his mind. The wonderful land "over the mountains" with thick canebrakes, salt licks frequented by deer and bluegrass meadows filled with buffalo drew him like a moth to a flame.

### **Suffering Great Loss**

In 1773, Boone started out with his family to settle in Kentucky. Five other families joined them as they traveled, all anxious to claim their share of the "free land" in the wilderness. As they traveled south, down the Powell Valley, and neared the Cumberland Gap, 17-year-old James Boone, Daniel's first-born son, and seven others lagged behind the main group as they herded the slow-moving cattle along the trail. Overtaken by darkness, they camped for the night. Just at dawn, about 20 Indians attacked their little camp. In the confusion, a slave named Adam escaped and hid nearby. His hiding place was close enough for him to hear the screams of the victims as the Indians tortured and killed them. Four of the group were killed; a fifth escaped wounded but was never found. Adam and an experienced woodsman, Isaac Crabtree, who was also wounded, were the only survivors.

When the families learned of the massacre, they returned to the scene to bury their loved ones. Grief stricken, Daniel and Rebecca Boone wrapped their son, James, in a white sheet and covered his grave with logs so wolves couldn't molest it. Then the discouraged families turned around and went back home. Sadly, James was not the only son Daniel Boone would lose to the Indian wars in the coming years. Nevertheless, Daniel still longed for the wilderness of Kentucky.

### **Blazing a Trail**

Two years later, in March of 1775, lawyer Richard Henderson tricked the Indians into signing the illegal Treaty of Sycamore Shoals. That piece of paper gave his Transylvania Company the much-disputed title to 20 million acres of the Indians' hunting grounds south of the Ohio River. Two months later, Daniel Boone, now an employee of Henderson, led 30 axe men to cut a trail through the Cumberland Gap and across the wilderness to the Kentucky River.





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*"I walked through the Cumberland Gap on a clear morning in June, going from southeast to northwest, just as hundreds of thousands of settlers approached the Gap 250 years ago..."*

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"Boone's Trace" was a rough trail, barely wide enough for a loaded pack horse to maneuver, that forged 100 miles beyond the Cumberland Gap. There, on the banks of the Kentucky River, at the western edge of America's frontier, Boonesborough was established. Boone's Trace didn't follow a straight line, it wound around swamps, followed ridges and forest openings, and forded rivers and streams at available shallows. However, the rough Trace allowed hunters and early settlers access to Kentucky.

It would be only two decades before the Trace was widened out enough for a wagon to pass and became the "Wilderness Road." Within the next 50 years, as many as 300,000 settlers would stream west on Boone's Wilderness Road through the Cumberland Gap to settle in Kentucky and the Ohio River Valley.

Although it was a dangerous journey because Indians still claimed much of the land, the Wilderness Road through the Gap soon became a route of commerce. Supplies moved westward, and produce, hogs and beef moved eastward to waiting markets.

#### **Official Pathway**

In 1792, U. S. Postal riders began carrying mail through the Gap. The road was eventually widened and leveled, and saw heavy use for years. During the 1800s, the roadway continued to be a major travel way for the Appalachian region. In 1908, the Wilderness Road through the Cumberland Gap became one of the first roads in the U.S. to be paved. That stretch of pavement eventually linked Detroit, Michigan, to Miami, Florida, by continuous paved road: the famous Dixie Highway. Meanwhile, the whole area was rock-quarried, coal-mined, water-diverted and generally misused. An important place in American history was nearly destroyed by the natural progression of development known as "progress."

Something needed to be done to save one of America's most historical landmarks—and something was done. In 1996, a traffic tunnel was completed through Cumberland Mountain near the historic Gap, and traffic was re-routed from the Gap through the new, mile-long tunnel. After completion of the tunnel, a project to restore the Cumberland Gap to its original appearance was started. For several miles, all signs of the highway were removed and the original grade re-established. The Gap was restored to its original contour. Trees of original forest species were planted to recreate the forest so that visitors who crossed the Gap on Boone's Trace would see it as it appeared in the 1700s. This section of the Wilderness Road is now a hiking trail through the large Cumberland Gap National Historic Park. Near





the Gap there is now a modern Visitor Center and museum.

### Recent Visit

Intrigued by the history and fame of the area, I recently visited the Cumberland Gap. I wanted to walk through that historic gateway. Driving south on the Wilderness Road, now a modern highway, the Cumberland Mountains still appear as an impressive wall to the west of Powell Valley.

On a lonely side road is a monument placed in memory of the James Boone massacre site. I walked up a nearby hill to view a small cemetery where several old pioneer graves were marked only with a chunk of local stone. Although no one knows for sure, one of the graves may be that of James Boone.

I walked through the Cumberland Gap on a clear morning in June, going from southeast to northwest, just as hundreds of thousands of settlers approached the Gap 250 years ago on their journey into Kentucky. Much of the trail wound through shady, old growth timber, but wildflowers bloomed along the trail in sunny openings.

Near the Gap, a side trail led to the opening of Gap Cave. Cool air rushing from the cave felt good on a warm June day. High above me, I saw the same rocky cliffs that Daniel Boone had spoken of. Indeed, it would be impossible

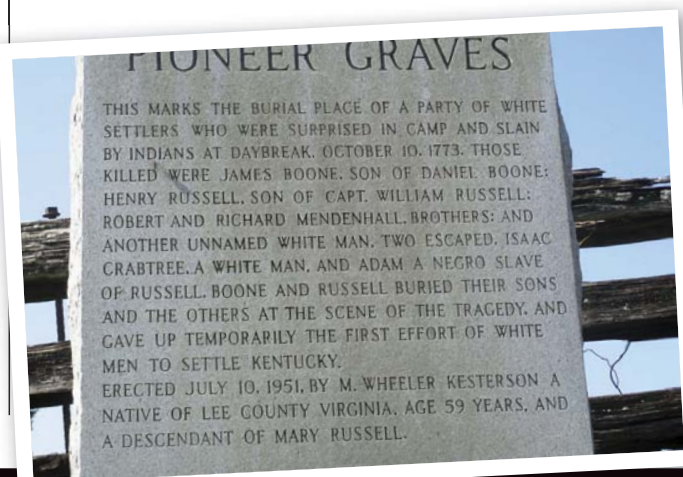
to lead a pack horse over those cliffs. The actual saddle of the Gap was not as impressive as the mountains around it. In fact, I met a couple who had just hiked over the Gap without realizing it. There was no spectacular scenic view from the top because thick, green forest limits the view of the surrounding mountains. A fairly gentle slope both ways from the pass provides the one easy, natural passageway through the imposing, long wall of rugged mountains.

Cumberland Gap is a subtle, humble pass that opened the way to our Manifest Destiny, the westward movement of a great nation. **MP**

*(opposite)* This is the sign you'll eventually come along. It marks the route of Boone's Trace over Cumberland Gap.

*(top)* These pioneer graves may be the final resting place of those slain in the James Boone massacre.

*(below)* The Monument stone in memory of the James Boone massacre.











· HOW-TO ·

# Utilizing Deer Hide

THERE ARE NUMEROUS THINGS YOU CAN DO WITH WELL-TAKEN-CARE-OF DEER LEATHER. THE CHOICE IS UP TO YOU.

By Jason Houser

**D**eer season is now over and with any luck you have filled a deer tag or two. A few venison dishes have been enjoyed, deer camp has been cleaned, and now you're just waiting until next fall for the fun to begin all over again. However, you probably have a few deer hides you might not know what to do with. Sure, you can take them to the back 40 and let the coyotes have their way, or you can utilize the hides in many different ways.

## **Selling and Trading**

Whitetail or mule deer hides make exceptional leather goods, especially gloves and coats. There are many companies in the United States that will trade gloves for your deer hides. One of the largest is North American Trading in Wisconsin (715-695-3533). If you would rather not have a new pair of gloves, they will also purchase your deer hides from you. Contact them for more details.

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*“Whitetail or mule deer hides make exceptional leather goods, especially gloves and coats.”*

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**When tanning hides yourself, don't expect a super-soft result. This is usually accomplished by utilizing a professional tanning service.**



### **Wall Mount**

Not in the mood for gloves? How about a nice wall decoration? Most taxidermists can tan a deer hide for a minimal cost. A soft, tanned deer hide looks beautiful hung on the wall. A couple of years ago, I shot a nice buck and had the head mounted and the hide tanned. I hung the hide on the wall and, directly above the hide, I placed the mounted buck. I have received countless comments on how nice this looks. If your taxidermist does not want to bother with tanning the hide, which some don't because they are busy with more profitable projects, there are several tanneries that will do it for you at a reasonable rate. In the past I have used Moyle Mink and Tannery with great results (208-678-8481; [www.moyle.net](http://www.moyle.net)).

### **Tanning the Hide Yourself**

For the do-it-yourself person, you can still end up with a nice tanned hide. Just do not expect the softness you would get if it was done by a professional. This past fall, I purchased a bottle of Deer Hunter's & Trapper's Hide Tanning Formula for \$8, which was more than enough to tan a deer hide. I imagine you have seen these little orange bottles in your favorite sportsman's catalog, trapping supply house or outdoor shop. It is easy to use, and in about four days, you will have a hide ready to display. Not only will this product tan deer hides, but I also used it to nicely tan a bobcat and red fox this past winter and still have a half of bottle left.

A word of caution: I do not recommend using a tanned deer hide as a floor rug. It does not take long before the hair begins to fall out after being walked on.

### **Selling to a Fur Warehouse**

It's possible to even make a profit on your deer hides. Many local fur buyers purchase deer hides.

Contact the local fur buyers to see how they would like it prepared. Many would just like them salted, rolled and frozen, but check first.

There are many companies who purchase deer hides to tan and later sell them at their store or on the Internet. Without a doubt, one of the largest in the country is Moscow Hide and Fur located in Idaho ([www.FurBuyer.com](http://www.FurBuyer.com)). They pay top rates of any company I have worked with and a whole lot more than your local buyer. But because they are a reputable company with a great many sources for hides,



Well-tanned deer hide can be used to make a variety of useful items for the outdoorsman. This knife sheath is attractive, functional and durable—just the way nature intended it.



they may be a little more picky than others; they only purchase high-quality hides.

For example, my local buyer pays \$5 for a frozen deer hide. Moscow Hide and Fur will pay \$25 for a large hide that is at least 55 inches long and \$15 for a small hide that is only 45 inches long. However, they want the hides they purchase to be fleshed. Go to their website [www.FurBuyer.com](http://www.FurBuyer.com) for more information.

Groenewold Fur & Wool Co. ([www.gfwco.com](http://www.gfwco.com) or 815-935-2381) travels the Midwest stopping at many locations buying all types of fur including deer hides. They will grade your skins and hides on the spot and give you a check immediately. This company normally pays more than a local buyer, but less than Moscow Hide and Fur. However, Groenewold does require that the hide be fleshed, there are no shipping fees and you are paid on the spot. Contact them regarding the routes they have scheduled for this upcoming season.

No matter which method you use for your deer hides, whether to sell them, have them tanned or trade them for gloves, always make sure you have your deer permit and hunting license available. It will be very difficult to do anything without these two documents. **MP**



Deer hide isn't the only option available. This caribou hide can offer great function as well, especially draped over a couch or coffee table.

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*"For the do-it-yourself person, you can still come out with a nice tanned hide."*

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# Longing for Adventure

This dedicated hunter searches his soul for the meaning behind the hunt. > By Joe Bell

A couple of seasons ago, I drove to a remote spot in the Colorado high country to finish out the second leg of an archery deer hunt. During the first segment of the hunt, my friend and I backpacked our fannies off, searching for bucks in a large designated wilderness area. We put in more than 40 miles on trail carrying full-size packs, all with nothing to show for it. It was easily the toughest, most grueling hunting experience of my life. We simply gave it our best for a week and then headed home.

At that point, I thought my wilderness mule-deer hunting was over for the year, as work was picking up and family life was getting pretty busy all over again. It was time to chalk off the hunt as another misstry. But my mind couldn't let it rest. Something was eating at me. Although most weeklong hunts usually leave me fulfilled for various reasons, whether successful or not, I felt empty on this one. I never felt the chance of success on that trip. It was more of a marathon backpacking trip than a pursuit for deer.

After fulfilling some work and family obligations, I loaded up my truck for a second try at these elusive deer. During the 12-hour drive from my northern Arizona home to the hunting spot, I questioned my sanity. My friend and I scoured these mountains, which was hit hard by a severe winter a few seasons back, and now I was returning—for what?

But I had a plan. This time, I would try my luck in a completely different spot, a location where I could drive to the end of a dirt road and then hike in for day hunts. It was still very remote but sensible in case I needed to change locations.

### Setting Up Camp

Upon arrival, I noticed several hunters around, but they were all pursuing elk, not deer. One group told me about a big buck they saw around camp, saying the deer just gawked at them, seemingly unfrightened. But then I thought, aren't they always when you're hunting something else?



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*“With boots off and extra wool socks on, I padded around like a mountain lion on the prowl.”*

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The problem was, how do you find a certain buck in this thick, aspen-covered foothill country? Usually you don't, so, with that in mind, my eyes gravitated toward the towering timberline ridges far to the north. It was a 2-mile walk across the basin to reach their base, but I knew that's where I needed to go, as if they were calling out to me.

That night, I cooked chicken and beans on my small propane burner, watched the stars and eventually retired within the camper shell of my old truck. There were six full days of hunting left in the archery deer season.

### A New Tactic

At sunup, I was on a slope close to the truck, peering through 15-power binoculars on a tripod. Within an hour or so I spotted bucks, only they were 3 to 4 miles away. I loaded up my backpack and began the race.

Two hours later, I was climbing the jagged landscapes in line with the deer, but when I arrived they were gone. I did this time after time with the same result. I knew seeing these deer was one thing; killing them would be another.

Tired of getting beat up doing the spot-and-stalk tactic, I decided it was time to switch gears. I would no longer spend my mornings glassing from a distance, and instead leave the truck before sunup so I could reach the high hills early enough to catch the deer on their feet, while they were still feeding.

The formula worked pretty nicely, as I was now getting closer and closer, but still not close enough before they saw or winded me.

The next day, I was back glassing from afar. I spied a big-racked buck, but again he disappeared when I reached the spot





(left to right) This photo shows the mountain range hunted by the author. Crossing the big valley below was required daily before venturing up toward the open ridgelines, where most of the bucks were seen. 🏹 Each year, the experience means much more to the author than the trophy itself. This buck was taken on a different trip to the Colorado high country, a very rewarding experience that ended with an extremely nice trophy arrowed at the 12,000-foot mark. 🏹 A variety of hunting tactics were used on the hunt, from long-range glassing to sitting and waiting, to still-hunting.

on the mountain. Then I saw him again, this time disappearing in a single bush patch. I plotted my course, and by 9:30 I was at the point above him. The wind was wrong, so I waited for the prevailing wind to take over. At exactly 11:30 I dropped downward, tiptoeing in search of the deer. With boots off and extra wool socks on, I padded around like a mountain lion on the prowl. I knew he was there, but I couldn't see him.

### Taking a Break

Stumped, I sat down and began snacking on a bagel. I noticed a strong mountain breeze fanning my face. I was now soaking in the sights and sounds of the wilderness. It was as if they were satisfying my hunger somehow—not so much as water for my mouth, but adventure for my soul. The feeling was strong and, suddenly, I had a sense of energy. I was now totally focused and ready to keep trying.

After finishing my snack, I began easing downhill, and as I did, the big buck erupted from a tunnel-like hole in the mountain. He was below me the whole time, less than 30 yards away. It was captivating, watching his monstrous rack float away within the folds in the terrain.

The next day I spotted him again—only this time, he didn't bed out in the open but went for the thick trees. I saw other bucks as well, only they were even farther up the ridge, almost out of range of my worn-out legs. But I felt the energy every day now, and it gave me what I needed to get going.

### Show Time

On the last day, I sat on the mountain top again, waiting for sundown. I would still-hunt my way back to camp, hoping for one last, fleeting chance.

My heart skipped a beat once I saw the flash of polished antler tips. The big buck was below me, casually on the move. But

the slope was so steep and my excitement so high that as I maneuvered for a shot, I was kicking rock everywhere.

Eventually I got my feet planted solidly, and the bow was drawn back. Of course, from all the ruckus and movement, the deer was on me now. But, by this time, I was zeroing in on his chest, and when everything felt right, the bow went off!

The arrow disappeared from my eyes midway out, and then I noticed a spark off a rock just below the buck's body. Was it a hit? He trotted off a good distance, then stopped to look back. There was no evidence of blood. Later I found the arrow. It was whisper clean, only damaged from the gravelly soil.

That day, instead of walking off the mountain feeling dejected and defeated, I was full, even though I had fouled up a good shot. My heart was finally right. Kill or no kill, it was the adventure and challenge of the hunt I was longing for, and nothing else. **MP**



# Dr. Saxton T. Pope

(Sept. 4, 1875 – Aug. 8, 1926)

Without this man's influence, hunting with a bow and arrow would not be what it is today. > By **Darryl Quidort**

**Saxton Pope** is considered to be the “father of modern bowhunting” in America. Many modern bowhunters know his name but few know very much about this highly accomplished outdoorsman, archer, bowhunter, doctor and author.

Born the son of an Army officer and surgeon at Fort Stockton, Texas in 1875, Saxton grew up in Army camps and isolated Western frontier towns. It was a harsh environment for a young man. By necessity, he learned many outdoor skills and became a stout, healthy athlete.

Gaining entrance to the University of California, he did well and, like his father, became a surgeon. After graduating from medical school in 1899, he opened his medical practice in Monterey, a small town near San Francisco. Saxton married Dr. Emma Wightman, a medical school classmate, and together they had four children. Later he became the surgical instructor of the medical school at the University of California and moved his family there.

This history brought young Saxton Pope to a place where monumental events would occur that set the course for pioneer archery and bowhunting in America.

In 1911, Ishi, (E-She) known as the “last wild Indian,” had been found near Oroville, California. The last remaining survivor of the Yahi tribe, Ishi was naked, nearly starved, and unable to communicate in English. He was promptly jailed until officials could decide what to do with him. Ishi had been thrust into modern civilization directly from the Stone Age. He had lived in the wilderness of the Mount Lassen area without contact with the outside world. Ishi was rescued from jail by Anthropology Professor Watterman, and taken to the University of California as a ward of the Museum of Anthropology. There he learned to live in the modern world.

The medical school where Dr. Pope taught was near the museum where Ishi had been given a “job” as a janitor. Pope was appointed as Ishi's medical doctor. Soon a strong bond of friendship formed

between Saxton and Ishi. Pope learned some of the Yahi language and spent a lot of time with Ishi. Ishi taught Pope about Native American archery and the Indian methods of hunting with a bow and arrow. Pope even returned with Ishi to the beloved mountain wilderness of the Yahi Indians. There they camped, hunted, and shared each other's philosophy and memories. Ishi taught Pope to stalk game with a noiseless step, slow movement, and use of cover. Ishi asked Saxton if he was part Indian and, although he was not, he answered, “Yes.” Pope loved Ishi like a brother.

Within a year, Will Compton, a bowyer and early American archer, came to meet Ishi and also met Dr. Pope. With their universal interest in archery, it was natural that Compton also became an archery mentor to Pope, teaching him bow making skills and archery in the Old English manner. As Pope gained experience in bow making he developed a preference for the English style longbow made of pacific Yew wood. Compton introduced Arthur Young to the group in 1915 as his sincere interest in archery was apparent. The athletic Art Young was probably the most adventurous of the group. During this time the archery pioneers became inseparable companions. They spent many days together pursuing archery interests, making bows and equipment, practicing shooting, and together they polished their bowhunting skills.

Sadly, with no immunity to the white man's diseases, Ishi developed tuberculosis. Pope cared for him until the end. Ishi passed away in 1916. He was cremated, in accordance to the Yahi custom, with his bow, arrows, and provisions by his side.

Pope and Young were left to continue camping and hunting together without their friend. With their completely handmade archery equipment they took many birds, much small game, and even deer. Always seeking adventure, they traveled to Yellowstone Park where, with official permission, they hunted grizzly bears with their bows and arrows. They hunted the big bears



COURTESY OF THE POPE & YOUNG CLUB

by moonlight. The grizzly bears that they killed are still on display as mounted specimens at the California Academy of Sciences.

Possibly, what set Saxton Pope apart from his mentors and friends was his writing skills. In 1923, Pope published one of the most influential books on archery in American history. *Hunting With The Bow And Arrow* is a classic book that has prompted thousands of people to take up the bow and arrow for recreation and hunting. In addition to hunting, the book also details how to make bows, arrows, broadheads, and other archery equipment. It also discusses archery theory, logic and the science of shooting. The book is written in a poetic prose that had been quoted many, many times.

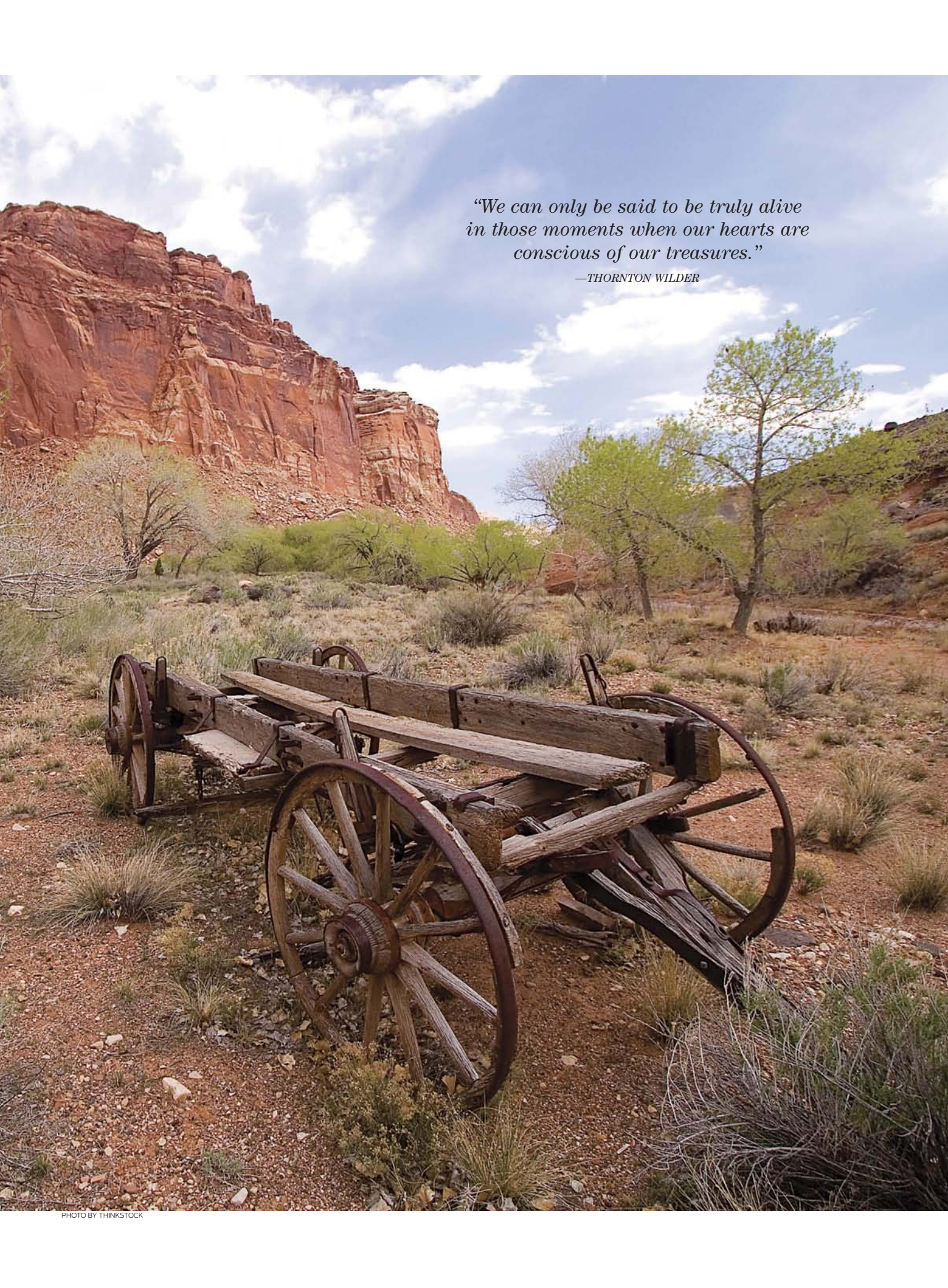
Pope's second book, *The Adventurous Bowmen*, was published in 1926, soon after Pope and Young's African safari where they used their bows to take many plains game animals and several African lions. While in Africa they tested not only their bows but themselves against truly dangerous game.

Pope also wrote three other, lesser known, but important texts. *Yahi Archery* (1918) is a treasure chest of information and photos of the time Pope spent with Ishi. *The Medical History of Ishi* (1920) is a detailed medical report on Ishi. And lastly, in *A Study of Bows And Arrows* (1923) Pope made a detailed, scientific study of archery equipment from around the world, even going so far as to borrow ancient bows from museums and shoot them in his tests.

Saxton Pope is the gentleman most credited with the bowhunting revival in America that began in the early 1900s and continues yet today. He is certainly the father of modern bowhunting in this country.

Shortly after returning from his five-month-long African adventure, Saxton Pope died from pneumonia in 1926. He was only 51 years old. **MP**





*"We can only be said to be truly alive  
in those moments when our hearts are  
conscious of our treasures."*

—THORNTON WILDER



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